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A Landscape Approach to Determining Significance of 19th and 20th Century Farmsteads and Rural Communities, Fort Leonard Wood, Missouri

Susan Enscore, Suzanne Keith Loechl, Megan Weaver Tooker, and Stephanie L. Nutt

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ABSTRACT

Determining significance and National Register of Historic Places (NRHP) eligibility status for 19th and 20th century farmsteads and rural communities is difficult for most historic archaeologists due in large part to the vast numbers of very similar sites. In 2002 Fort Leonard Wood, MO, initiated a project to develop a methodology for assessing its 19th and 20th century historic sites. Two hundred and seven historic archaeological sites have been identified on the installation. Fort Leonard Wood has also produced a historical context covering the period from first European settlement to purchase of the property for the installation in 1940. By taking into account existing archaeological site data, historical context information, historic maps and photographs, archival records, relevant geographical data, architectural information, and distinguishing landscape characteristics, a larger physical context has been created for the historic sites. This comprehensive perspective on the landscape allows Fort Leonard Wood to determine which 19th and 20th century sites are most likely to contain useful information, thereby allowing the installation to focus its efforts on the more significant sites. The methodology provided in this study will provide guidelines for determining site significance and NRHP eligibility in a timely and cost-effective manner.

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Preface

This study was conducted for Fort Leonard Wood under Military Interdepartmental Purchase Request (MIPR) MIPR2ACER006, entitled "Innovative Approaches for NRHP Evaluation of Historic Archaeological Sites, Fort Leonard Wood, Missouri"; Work Unit D63952, "Methodology for a Landscape Approach to Historic Significance for Historic Archaeology Resources at Fort Leonard Wood, MO." The technical monitor was Dr. Richard Edging, Cultural Resource Manager, Center for Environmental Management of Military Lands, Fort Leonard Wood Natural Resources Branch, Fort Leonard Wood, Missouri.

The work was performed by the Land and Heritage Conservation Branch (CN-C) of the Installations Division (CN), Construction Engineering Research Laboratory (CERL). The CERL Project Manager was Susan I. Enscore. Steven D. Smith, Richard Edging, and Sang Pak are gratefully acknowledged for their contributions to this study. Dr. Lucy Whalley is Chief, CEERD-CN-C, and L. Michael Golish is Acting Chief, CEERD-CN. The associated Technical Director was Dr. William D. Severinghaus, CEERD-CV-T. The Acting Director of CERL is Dr. Ilker R. Adiguzel.

CERL is an element of the Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers. The Commander and Executive Director of the ERDC is COL James R. Rowan and the Director is Dr. James R. Houston.

1 Introduction

Background

The National Historic Preservation Act of 1966 (NHPA), as amended, provides requirements for consideration of historic properties by Federal agencies. Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties and consult with preservation agencies regarding these effects and possible mitigating actions before spending federal funds on the undertaking. Historic properties are those that are either listed or eligible for listing in the National Register of Historic Places (NRHP, or "National Register"). Section 110 of the NHPA requires installations and commands to develop and implement plans for the identification, management, and nomination of cultural resources to the NRHP. Army Regulation 200-4 and Pamphlet 200-4 require installations to have Integrated Cultural Resource Management Plans that incorporate a landscape approach to resource identification and management. This requirement is reiterated in the Fort Leonard Wood Integrated Cultural Resources Management Plan (2003).

As part of its ongoing program of regulatory compliance and cultural resources planning, Fort Leonard Wood has surveyed approximately 90% of its installation land looking for both prehistoric and historic archaeological sites. Prior to Army acquisition, the area's land uses consisted mainly of small farms and the rural communities that supported them. Purchase of the land for Fort Leonard Wood resulted in the loss of many communities, including Bloodland, Palace, Evening Shade, Cookville, Moab, Tribune, Wharton, and Wildwood along with hundreds of farmsteads and isolated houses. Previous archaeological surveys have found former towns, farmsteads, schools, churches, and other properties such as cemeteries. To date, 207 historic archaeological sites have been identified on Fort Leonard Wood lands. Located approximately 120 miles southwest of St. Louis, Missouri and 85 miles northeast of Springfield, Missouri, the installation is adjacent to the Mark Twain National Forest. Occupying southern Pulaski County, and partially bounded by two waterways, the Big Piney River and Roubidoux Creek, the area contains a variety of topographic features, including water and floodplains, bluffs, rolling hills, and uplands.

One product of Fort Leonard Wood cultural resources stewardship activities was Steven D. Smith's 1993 study, *Made It In the Timber: A Historic Overview of the Fort Leonard Wood Region, 1800-1940* (Smith 1993), which provides a historic context for understanding and investigating the installation's historic archaeological sites. The Smith study employs a landscape approach in a chronological progression, providing information on the physical, commercial, and social development of the area before the creation of Fort Leonard Wood in 1940. Location-specific information and historic context, along with site integrity, are the basic prerequisites for evaluating the historic archaeological sites at Fort Leonard Wood for National Register eligibility. In order to complete the National Register evaluations systematically and efficiently, a means is needed to relate the historic context to the specific archaeological sites.

A landscape approach provides a framework for understanding the relationships between a region's history and its infrastructure, landscape architecture, planning, and archaeology. Recent National Register nominations of historic districts on military installations reflect this expanded approach with discussions of the overall plan of the installation and the interrelationships among component parts. The evaluation of military installations as singular entities with unique cultural traditions and distinctive physical resources is the key to an integrated investigation encompassing all of the historic resources of a military installation.

In order to maintain cost-effectiveness in its cultural resources stewardship program, Fort Leonard Wood can benefit from expert guidance on how to systematically evaluate its historic archaeological sites. Such guidance would provide Fort Leonard Wood with a valid and supportable methodology for rapidly identifying the many sites that do not require a full-scale evaluation of significance, thus saving time and money in cultural resources stewardship. The guidance would also provide a comprehensive perspective on the landscape useful in evaluating new discoveries and making timely, appropriate mitigation decisions for undertakings involving the installation's historic archaeological resources.

Objectives

The objectives of this project were to study the existing site and context information on historic archaeological sites at Fort Leonard Wood and use the findings to help develop a methodology for determining historic significance and National Register eligibility.

Approach

Phase I of this project consisted of compiling and analyzing available data on historic archaeology at Fort Leonard Wood. Site visits to various archives and document repositories produced a significant amount of data to be examined for content and applicability.

Phase II focused on ways to incorporate the Smith (1993) historic context into a systematic method for screening Fort Leonard Wood historic archaeological sites in terms of potential eligibility for the National Register. A questionnaire, the *Eligibility Prescreening Form*, was developed with reference to landscape archaeology techniques, National Register of Historic Places guidance, the historic context, the historical data gathered through research and the findings of a study on area architectural styles and settlement patterns circa 1940. Simultaneously, historic themes and periods were identified within the historic context and used to create a *Site Inventory Form*, intended for use as a supplement to the *Archaeological Survey of Missouri* form (2000), which is maintained by the Archaeological Survey of Missouri (ASM, University of Missouri – Columbia). Designed to be used as part of a two-step eligibility-screening process, the *Eligibility Prescreening Form* can be used with existing inventory data to indicate which identified archaeological sites warrant further investigation, and the *Site Inventory Form* can be used to guide and record those investigations.

A detailed explanation of the project methodology is provided in Chapter 2.

2 Project Methodology

Landscape Approach

The process of applying a landscape approach to the determination of significance for historic archaeological sites required a multidisciplinary team of experts including landscape architects, an archaeologist, and a geographer. Team members came from both ERDC-CERL and Fort Leonard Wood.

Preservationists have long recognized the value of using a holistic approach to researching historic and cultural resources. A holistic approach takes into account the relationships between a region's history and its infrastructure, landscape architecture, planning, and archaeology.

The American landscape is largely shaped by human activity and land-use decisions. It serves as the setting for events in the nation's history, and as such it is modified as a result of social trends as well as the more localized actions of groups or individuals. Change can occur suddenly and dramatically, as when a courthouse is razed or a community is constructed. It can also occur gradually and subtly, as in the vanishing of windmills from farms or the replacement of wooden barns with metal pole barns. Over time, the landscape becomes a record of individual and group decisions, both economic and political, in terms of what to build and what to raze, what to maintain and what to neglect, what to preserve and what to replace. The decisions are guided by cultural values, whether pre-industrial or modern, local or national. The landscape reflects those decisions and the cultural values that drove them.

As history plays out on the land, it leaves its mark. Sometimes the land remains relatively unchanged from generation to generation, but more often, changes accumulate in layers. In areas of extensive human activity the landscape often appears as a patchwork, with elements of older layers 'poking through' newer layers and surviving side-by-side with the elements of the newer layers.

The value of reading the landscape comes through recognition of relationships among the components that make up that landscape. Identifying and recognizing these patterns is akin to above-ground archaeology. In archaeology, an indi-

vidual projectile point or pottery shard may be important for its form and design, but greater significance is revealed when its context and origin are understood. An understanding of the relationship of the object to other objects at the site, to the soil layer in which it was found, and to the site in general gives the object greater meaning and clarifies its relative significance. In a similar way, an individual building, structure, or open space in the landscape may have significance, but an understanding of its relationship to other landscape components and its general surroundings clarifies its relative significance.

For the current work it was assumed that many Fort Leonard Wood historic sites, particularly farmsteads, were similar in terms of size, materials, construction, and layout. A key task was to distinguish between the typical and the atypical so that the number of properties on the cultural resources inventory currently considered to be eligible for the National Register might be reduced. With the help of the *Site Inventory Form* and the *Eligibility Prescreening Form* this can be done by (1) determining which properties are the most typical, (2) finding the best examples if those properties and determining their significance, and (3) preserving or documenting the best examples. Once these steps have been undertaken those typical properties that do not represent the best examples can be removed from the cultural resources inventory.

Because so much of the evaluation process is done on site, a workbook was developed to highlight the history, technical data, and background needed to accurately evaluate resources at Fort Leonard Wood (see Appendix). The workbook can be removed and taken into the field enabling staff, contactors, and students to make knowledgeable and consistent interpretations of the site.

Data Gathering

The first step was to ascertain the extent and type of information available on the historic archaeology at Fort Leonard Wood. Over several months the project team collected relevant documentation, as listed under "References" in section A.5 of the Appendix. The types of material involved included historical contexts and reports, oral histories, local histories, historic archaeology studies, maps, aerial photographs, historic photographs, newspaper articles, geographic information system (GIS) maps, and land plats. Much of this information was provided by the Cultural Resources Manager at Fort Leonard Wood.

The following repositories were visited:

- Western Historical Manuscript Collection at the University of Missouri, Columbia and the University of Missouri, Rolla
- State Archives in Jefferson City, MO
- Missouri State Historical Society in Columbia, MO
- Waynesville, MO, Public Library
- University of Missouri, Columbia, Newspaper Library.

In addition, current literature on landscape approaches taken by historic archaeologists was reviewed, and previous approaches used on other Army installations to evaluate historic archaeological sites were considered.

Data Analysis

After the essential project input data had been collected it was necessary to analyze and integrate it for incorporation into the eligibility-screening methodology. As noted previously, the data were analyzed in the context presented in Smith (1993), which defines the timeline, settlement patterns, site types, and material culture data upon which the methodology would be based. The methodology is intended to provide an operational means to align the concepts and events presented in Smith (1993) with artifacts remaining on the ground at specific sites on the Fort Leonard Wood military reservation. The additional archival materials collected were used to support the historic context provided in Smith (1993) and to provide an idea of the potential archaeological record in the area.

In addition to text, visual information was also collected and analyzed. Historic and current maps, aerial and ground photographs, and GIS layers provided the project team with a graphical representation of land use patterns in the area before the creation of Fort Leonard Wood. A Corps of Engineers GIS pilot study (Bennett 1996) developed an ownership grid map and a land ownership database to be used for Fort Leonard Wood historical data. The map and database are integrated with the installation GIS systems and together these are a valuable resource for studying the cultural landscape of Fort Leonard Wood.

An ownership grid map was created by digitizing U.S. Geological Survey (USGS) maps with land divisions based on 19th century General Land Office (GLO) maps. The land ownership database was created using land ownership data gathered from the 1890-1906 Pulaski County Map, the 1930s Plat Map of Pulaski County, and the 1941 Acquisition Maps created by the Missouri River Division of the War Department (see “Documentation and Maps” under section A.2 in the Appendix). The land ownership database is linked via desktop computer to

the ownership grid map, and it is possible to bring up ownership history by clicking on a location or historic resource on the digital map. This map and database, in addition to the aerial photographs available from the late 1930s, provide a good picture of the landscape and the built environment before the construction of Fort Leonard Wood. This computer-aided resource can be very helpful in locating a particular property, and it can provide access to data on cultural affiliations and settlement patterns for the area. These data should be consulted before making site visits, evaluations of significance, or determinations of National Register eligibility.

During Phase II, research was conducted to examine the published work of cultural geographers and material culture experts specializing in the Ozark region and the time periods covered in Smith (1993). The findings of that research were condensed into the workbook section of this report (Appendix) to facilitate transport and use in the field. In addition, this research was incorporated into the *Site Inventory Form* for consistent evaluation of resources

National Register Eligibility

National Register eligibility is determined if a property possesses historic significance and integrity. *Significance* is defined as the meaning or value ascribed to a cultural landscape based on the National Register criteria for evaluation and normally stems from a combination of association and integrity (Birnbaum 1996, 5). A property must possess significance in at least one of the following four aspects as specified by the National Register criteria. Complex or multi-layered landscapes or historic sites may have significance under several criteria. The four National Register criteria are:

Criterion A applies to properties associated with events that have made significant contributions to the broad patterns of history.

Criterion B applies to properties associated with the lives of persons significant in our past.

Criterion C applies to properties embodying the distinctive characteristics of a type, period, or method of construction; possessing high artistic values; or representing a significant and distinguishable entity whose components may lack individual distinction.

Criterion D applies to properties that have yielded or are likely to yield, information important to prehistory or history.

Integrity is based on the current condition of the existing landscape compared to the historical condition using the National Register's seven aspects of integrity. *Integrity* is defined as the authenticity of a property's historic identity, evinced by the survival of physical characteristics that existed during the property's historic period (Birnbaum 1996, 5). The seven qualities of integrity as defined by the National Register are location, setting, feeling, association, design, workmanship, and materials.

Eligibility Components

The goal of the Phase II work was to develop a way to determine a threshold for site eligibility that was not based solely on 'blind' determinations made in a remote office and did not require a visit to every site in the area. Based on time periods and major themes from the extended version of Smith's context (Smith 2003), patterns were sought between and among sites that reflected these themes. One of the first patterns to emerge was the prevalence of farmstead sites, which vastly outnumbered other kinds of places both during the historic periods and in terms of existing archaeological sites. Fort Leonard Wood needed help making National Register eligibility determinations, especially any screening methodology that could help to avoid the costs of unnecessary site-by-site investigations. A valid, supportable screening methodology would offer the best return on investment in terms of information potential and representation of periods and areas of significance.

In order to determine what was typical (or highly representative of each historic period), information on the local vernacular architecture and material culture was studied. Studies by cultural geographers and experts on the Ozarks and the Upland South culture areas were reviewed, and content analyses were performed on sets of historic photographs showing area farmsteads around 1940. The literature provided information on common forms of farmstead arrangement, settlement patterns, and architectural styles for the region. For the content analysis, four sets of historic photographs compiled in studies of the period immediately preceding purchase of land for Fort Leonard Wood were studied. Photographic content was organized into a list of characteristics encompassing layout, building materials, building size, number of outbuildings, landscape elements such as fencing, and building style. Statistics resulting from this portion of the study can be found in section A.2 of the Appendix.

Concurrently with the additional literature search and photo content analyses, the previously identified historic archaeological sites on Fort Leonard Wood were studied to help characterize the concept of a typical site. As noted previously, farmstead sites are by far the most numerous type in the Fort Leonard Wood inventory. The cultural resources inventory forms for these sites were content-analyzed to identify important characteristic elements such as number of features present, functions, type of construction material, footprint dimensions, and estimated age. Along with this research, local histories and oral histories were examined to determine both the most common and most prominent landowner names in the area, providing another way to distinguish the typical from the atypical (see section A.2 of the Appendix).

Eligibility Prescreening Form

Using the significance indicators developed as described above, questions were created to help indicate which sites require on-site investigation to effectively evaluate National Register eligibility. Indications or "flags" of significance arise when there is correspondence between site features and the salient characteristics of the property. Significance flags can be assigned without incurring the expense of on-site investigation through analysis of information from the current inventory forms on file at Fort Leonard Wood. Where on-site study is warranted, significance flags can also help prioritize the sites for visits and further investigation.

Some of the significance flags identified through this research are (1) continuity of ownership, (2) multiple site features (such as wells, cisterns, foundations and traces of circulation), (3) estimated age of artifacts, (4) proximity to other significant sites creating a possible cluster, and (5) high integrity or low level of disturbance. The flags were assigned one of two levels of importance. Any Level I significance flag raised for a site means further investigation is warranted. If three Level II flags identified for a site, then further investigation is likewise warranted.

If the significance criteria are not met, the site can be determined not eligible for the National Register. The questions are compiled in the *Eligibility Prescreeening Form* (see section A.6 of the Appendix).

Supplemental Site Inventory Form

Sites flagged for prospective National Register eligibility will be field-investigated and inventoried using the standard *Archaeological Survey of Missouri* form (ASM 2000) and the *Site Inventory Form*, designed to supplement the standard form to assist field workers by providing more localized content related to the landscape, historical context, and material culture. The *Site Inventory Form* includes data fields for recording information on periods of significance, historic themes, architectural elements, and settlement patterns in addition to the more standard archaeological data (see section A.7 in the Appendix). The information gathered on the form will provide the historic context significance and integrity data necessary for National Register eligibility determinations.

Field Test and Future Research Applications

Beginning in 2004 FLW began field-testing the *Eligibility Prescreening Form* and *Site Inventory Form*. Initial tests of the forms have proven them to be useful for site assessments, particularly for making not eligible determinations. However, possible refinement of the eligibility determining flags may already be necessary. While no eligible or potentially eligible sites have been wrongly assessed as not eligible, there have been several sites that, upon completion of the Eligibility Prescreening Form, appear to have integrity only to have a field visit contradict this finding. To remedy this situation some of the questions asked in the forms may need to be more selective. On the other hand, it may simply be that the only way to determine site integrity for some of FLW's historical sites is with a field visit – in other words they may look good on paper, but in reality have very little integrity and be determined not eligible for the National Register. More sites will be assessed using the form as is before deciding whether or not refinement is necessary.

Also in 2004, FLW obtained funding to conduct Phase II archaeological investigations on three historic archaeological sites on the installation. These sites were chosen using the Eligibility Prescreening Form. The sites consisted of two farmsteads (23PU280 and 23PU402) and a farmstead and mill combined (23PU233). Results from the questions on the form indicated all the sites had little disturbance, had the potential for buried deposits, possessed multiple structural features, and possibly contained pre-20th century artifacts. In addition, 23PU280 had two single pen structures, and 23PU233 was located in a hollow, served as a mill as well as a farm, and had continuity of ownership. Based

on these results the three sites had the potential to be eligible to the National Register.

Results from the Phase II investigations indicate 23PU280 is eligible for the National Register under Criterion C and D, while 23PU233 and 23PU402 are not eligible. 23PU280's significance lies in the fact that it retains relatively intact examples of an architectural type (pen architecture), intact subsurface deposits, and a narrow span of occupation. 23PU233 and 23PU402 were determined not eligible due to a lack of spatially or temporally discrete artifacts, catastrophically demolished structures (due to military occupation of the properties, and the paucity of archival information. However, investigators note that if the mill remains at 23PU233 could be located in the future the NRHP eligibility for this site should be reevaluated (Krejsa and McDowell, in prep.).

While only one of the three sites selected was ultimately determined to be eligible to the National Register, the *Eligibility Prescreening Form* was successful in winnowing these three sites from the larger pool of sites. Furthermore, the factors that caused the two sites to be determined not eligible could only have been revealed through field investigations at the sites. It is suspected this will be the case for many of the historic archaeological sites at FLW, and an eligibility ratio of one in three is not unlikely.

3 Summary

It was determined that Fort Leonard Wood could benefit from a cost-effective, supportable expert methodology for determining the prospective and actual eligibility of its historic archaeology sites for the National Register of Historic Places. The objectives of the research reported here were to study the existing site and context information on historic archaeological sites at Fort Leonard Wood and to incorporate the findings into a methodology for cost-effectively determining National Register eligibility. The methodology is based on a holistic, landscape-level approach that illuminates connections between a region's history and its infrastructure, landscape architecture, planning, and archaeology.

The methodology is applied in two stages. The first stage is a prescreening process that uses existing inventory data in conjunction with an installation-specific supplemental questionnaire to determine whether a site has enough significance and historical integrity to warrant an on-site archaeological and historical investigation. The second stage, for sites identified with the requisite number of eligibility flags, is an on-site investigation that employs a supplemental resource inventory form tailored to artifacts specifically relevant to the local historical context and material culture.

One purpose of the methodology is to eliminate properties from the cultural resources inventory, without incurring the costs of a full-scale on-site investigation, through the application of a prescreening process that reliably indicates a site's prospective National Register eligibility. The other purpose of the methodology is to improve the efficiency and reliability of on-site investigations to ensure that National Register eligibility determinations are valid and cost-effective.

A preliminary field-test of the methodology was completed between 2004 and 2005. Three sites were selected using the *Eligibility Prescreening Form* and Phase II archaeological investigations were completed in the field. Of the three sites screened as potentially eligible, only one site was determined to be eligible. While further field-testing of the forms may reveal refinement of the forms is needed, the prescreening process proved useful in winnowing sites prior to field investigations.

Two potential areas of future research would aid in archival research. First, while the current land ownership database, grid maps, historic maps, and acquisition maps contain useful material, they could be more useful if merged into one and changed to a more pictorial representation of the land tracts, possibly by the addition of symbols representing the types of structures expected to be found at the individual sites or land tracts. This would be most useful when surveying for undiscovered sites. In addition, developing a capability for highlighting multiple land tracts held by a single owner and for separating out land uses would provide a clearer picture of the location of resource clusters. These clusters may include overlapping resource types (e.g., industrial sites, village sites, and rural sites) and overlapping periods of significance (Civil War, Farming Period, Great Depression).

Second, results of the data gathering phase of this project indicated a need for more specific information on construction and siting pertaining to the types of buildings and structures that may be found on Fort Leonard Wood historic archaeological sites. A preliminary field test of *Site Inventory Form* also revealed a need for more architectural history on the area. Acquisition of that additional information would enable the project team to craft more specific and relevant questions for use in the field survey.

Appendix: Workbook for the Evaluation of Historic Archaeological Resources at Fort Leonard Wood, Missouri

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Workbook for the Evaluation of Historic Archaeological Resources at Fort Leonard Wood, Missouri

Farmstead along the Big Piney River, date unknown. Used by permission, State Historical Society of Missouri, Columbia.

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I How to Use the Workbook

Introduction

This workbook is a stand-alone document created to facilitate the evaluation of the historic archaeological resources at Fort Leonard Wood, Missouri. The process of determining significance of historic archaeology properties is time-consuming and complex. The historical data in this workbook was compiled to provide an overview of the types of resources in the area that one might come across while inventorying a historic property.

This workbook should be used along with National Register Bulletin #36, *Guidelines for Evaluating and Registering Historic Archaeological Sites and Districts*, and the Missouri State Inventory form. A historic property is determined significant or not significant based on the application of standardized National Register criteria within the property's historic context. A property is determined significant if it is associated with one or more of four criteria based on historically significant events, persons, design/construction styles and methods, or information potential. Defining significance requires several steps. First, researchers need to summarize the history in a way that permits temporal and spatial analysis. The next step is to establish the significance of the historical resources themselves using the standardized National Register criteria. Next, periods, areas, and levels of significance are determined. Lastly, a statement of significance is drafted that summarizes the significance of the property as evaluated.

Integrity is the ability of a property to convey its significance. Within the concept of integrity, the National Register criteria recognize seven qualities, or aspects, that in various combinations define integrity. Determining which of these aspects are most important for a particular property to convey its significance requires knowing why, where, and when the property is significant. Therefore, assessments of integrity come after the determination of significance. The seven aspects of integrity are: location, design, setting, materials, workmanship, feeling and association. Decisions about the integrity of historic properties and landscapes require professional judgments about whether the property today reflects the spatial organization, physical components, and historical associations

that it attained during the periods of significance. While no resource will appear exactly as it did fifty or 100 years ago, historic properties with integrity retain recognizable qualities of their past.

Historic Context for Fort Leonard Wood Historic Archaeological Sites

Steven D. Smith wrote an in-depth historic context for the Fort Leonard Wood region, entitled *Made It In The Timber* (1993). This context was recently published as a book, *Made In the Timber* (2003). An overview of his work is provided in this section for reference either in the office or in the field. Smith's historic periods, historic and cultural themes, and the site types identified in the region are important in evaluating historical sites. Each site should be evaluated according these criteria and will assist in the final determination.

A study of the vernacular architecture of the region is also included for reference and highlights what historically existed in the region. The sketches and photographs are useful when looking at foundations and ruins and may be used in the field. A list of significant persons in the area is included to assist in the documentation and research of the property.

Background and Historic Maps

Several maps are key in evaluating historical sites since they show property boundaries over time, and may show ownership and help date a property. These are all important in determining a period of use for the property and eventually in determining significance. Historic maps, tract maps, and USGS maps should be consulted before going out on a site visit. They are important in reading the landscape and enabling us to determine what was there historically versus what is there today.

Present Day Context

Today, the military has an important mission to accomplish, which may impact known and unidentified resources. Until resources are identified as significant and have the proper protection, they are at risk for further deterioration and potential loss. This section gives an overview of impacts and uses of the landscape today, potential impacts in the future, and the existing site documentation. This

section also contains tables of general data collected from existing site files. An artifact identification list is included for reference.

Part 1: Eligibility Prescreening Form

Part 1 of the site inventory process is a form designed to give a preliminary indication of the potential eligibility of a property. While the form alone should not be used to determine significance it can in some instances determine non-significance. The form consists of a set of yes/no questions in a flow sequence designed to highlight or flag any historic or unique characteristics of the site that may indicate significance.

This form is divided into two levels. In the first level, one "yes" answer indicates the site has a high probability of significance and eligibility for the National Register. If any of the Level 1 questions are answered "yes", a site visit and further research should follow.

If three or more questions in Level II are answered "yes", the site has a high probability of significance and integrity for National Register eligibility and a site visit and further research are required. It should be noted that this number is a guideline and may need to be reviewed in the future. There is the potential that, for some historical sites, some Level II questions will result in an inclusive, or "don't know," response. In this situation record the inconclusive responses and move on to the next question. Inconclusive responses may require a site visit and further research.

Part 1 of the survey should be completed in the office using the historic context section, the documentation and maps, and any existing site file information before any visit to the site. It may be helpful to bring a copy of this form into the field for reference while completing the field inventory form.

Part 2: Site Inventory Form

The Eligibility Prescreening Form should be completed in the office using the historic context section. The second form — the Site Inventory Form — should be completed in the field. Although every question provided on this form may not have an answer, but the intent is to help the team complete a thorough investigation in the field.

II Historic Context

Analysis of Smith's Historic Context

Historic and Cultural Themes

The historic context for the Fort Leonard Wood lands has been identified by Smith (1993) in *Made It In The Timber* as an Ozark derivation of the Upland South tradition, defined as both a cultural tradition and geographical region. In other words, predominantly white, farmer-hunter, rural, "plain folk" settled in the South and southern portions of northern states, such as the Missouri Ozarks (Figure 1).

Figure 1: Map of the Ozark region in Missouri (Sizemore 1994, 8).

The mountainous, forested, rugged land of the Ozarks provided ample wild game but marginal agricultural soils. This landscape appealed to the Scots-Irish settlers from Tennessee and Kentucky who migrated to the area in the 19th century. They were hardy and independent, personifying the Upland South tradition. This cultural tradition persisted and refined itself as an Ozark lifestyle, and continues to define the cultural traditions of Pulaski County today.

A number of research themes have been identified under which the archaeology and history of southern Pulaski County and the Fort Leonard Wood lands should be investigated. These themes are the Upland South Ozark Derivation, Pioneer History of Pulaski County, the Civil War in Pulaski County, the Lumber Industry and Tie-hacking in Pulaski County, the Effect of the Railroads on Pulaski County, and the Depression Landscape. These themes are briefly described below. A variety of research methods and theories should be employed to

explore each of these themes, including archaeological, architectural, oral history, cultural geography, historical, archival, GIS mapping, and genealogy.

Upland South Ozark Derivation: This theme explores aspects of the Upland South cultural tradition throughout the period of historic settlement and occupation of the Fort Leonard Wood lands, 1800-1940. This major theme is divided into a variety of sub-themes designed to address traditional lifeways and folkways, settlement patterns, architecture, economic pursuits, political and social life, archaeological site visibility and signature, and material culture.

Figure 2: Photo of the Civil War-era McCulley dogtrot style house (FLW Cultural Resources Program).

Pioneer History in Pulaski County: This theme explores antebellum Pulaski County history from 1830-1860, including population and settlement, agriculture, towns, and social institutions (Figure 2).

Civil War in Pulaski County: This theme explores the effects of the Civil War on Pulaski County, including occupation by Union forces, the devastation of the landscape, reconstruction efforts, and new immigrants after the war.

Lumber Industry and Tie-Hacking in Pulaski County: This theme explores residents' dependence on local timber for commercial purposes during the late 19th and early 20th centuries. Timber harvesting, tie-hacking, and tie-rafting provided much needed supplemental income for many residents, and for some their entire livelihood.

Effect of the Railroads on Pulaski County: This theme explores the impact of the railroad on the development of the county. The original route, abandoned because of the Civil War, was eventually located in the northern potion of the county, further isolating southern Pulaski County and contributing to the lack of development and growth in the late 19th and early 20th centuries.

Depression Landscape: This theme explores the exhaustion and eventual demise of the already tenuous landscape in the 1920s and 1930s, due to years of farming and timber harvesting. It also explores the impacts of the Great Depression and

the eventual displacement of the southern Pulaski County residents due to the arrival of the U.S. Army and the creation of Fort Leonard Wood.

Periods of Significance

Smith (1993) identifies three main historic periods in *Made It In The Timber*: Initial Occupation and Settlement from Exploration until 1867; Farming and Tie Hacking, from 1867-1910; and The Landscape Exhausted, from 1910-1940. Identified historic properties should be evaluated to fit into the historic periods as defined by Smith, and then a determination of period of significance can be made. The period of significance for an archaeological site is the "time range (usually estimated) during which the property was occupied or used and for which the property is likely to yield important information" (Townsend et al. 2000, 23).

Initial Occupation and Settlement from Exploration until 1867: Initial historic period settlement of the landscape was by Euro-Americans, first as hunter/gatherers and lumbermen, then as frontier farmers. Two mills, one on each riverbank, were the first clusters of buildings in the area. Railroad work begun in the area to connect St. Louis to Springfield. The Civil War drastically changed the Pulaski County landscape. Guerilla-like warfare throughout the Ozarks prompted many women and children to move to Waynesville, the county seat, or northern states, for safety. By the end of the war, much of the landscape lay in ruins; houses were burned, crops destroyed, and animals lost.

Farming and Tie Hacking, from 1867-1910: After the Civil War many of the original settlers who had fled did not return to the area to rebuild. In their place came new settlers from southern Indiana and Illinois. Settlement of the upland prairie was completed during this period. Farms could be found throughout the entire region, connected by the Old Houston Road. Farmers and tie-hackers stripped the wooded areas of the uplands as they cut trees to fill the ever-growing demand for railroad ties. Because the Ozarks region was more frontier-like than the rest of Missouri and the upper Midwest, the people of the region were somewhat isolated and learned to be self-reliant and independent.

The Landscape Exhausted, from 1910-1940: Early prosperity marked the start of this period. General farmers in the uplands began specialized cattle farming and WWI increased the demand for corn and wheat, in turn increasing the amount of land in cultivation. The need for railroad ties was high and provided extra income for farmers. However the 1920s brought ruin to Pulaski County and the Ozarks region. Tie-hacking died out and the already marginal soils were

Figure 3: A local family receiving a WPA land use permit, circa 1941 (Mark Twain National Forest).

barren of trees, eroded, and poor. The National Forest Service bought much of the land for conservation purposes. The Great Depression hit the area hard, and many in the region were forced to rely on governmental assistance for survival (Figure 3). The final blow to southern Pulaski County came with the construction of Fort Leonard Wood in 1940, marked by the displacement of many families and the end to such communities as Bloodland, Cookville, Moab, Palace, Tribune, and Wharton.

Site Types

As adapted from Smith's 1993 historic context *Made It In the Timber,* four major functional classes of archaeological sites have been identified at Fort Leonard Wood. Each of the four classes contains numerous site types. The major functional classes are 1) Agricultural Sites; 2) Community Service Centers; 3) Special Activity Sites; and 4) Transportation-Related Sites.

Figure 4: A local farmstead, circa 1937 (Mark Twain National Forest).

By far the majority of Fort Leonard Wood's recorded historic period archaeological sites fall into the Agricultural Sites class. This class includes sites such as hunter-squatter and pioneer settler sites; subsistence, general, and specialized farms; share-tenant and renter farms; and rural residences. Where possible, the fields and outbuildings removed from the farmstead proper, but clearly associated with it, are considered part of the farm site (Figure 4). Obviously, the likelihood of finding substantial remains of a hunter-squatter cabin (circa 1815-1840) is much lower than that of finding the remains of a share-tenant farm (circa 1870-1940). However, the potential exists, therefore these low visibility site types are included.

Community Service Centers consist of those low order central places where local farmers and other community members would have gathered to market, trade, and exchange goods; and to practice social, political, educational, and political activities. Site types include saw and gristmills, general stores, service stations, post offices, community buildings, schools, churches, and cemeteries. Often this variety of buildings would be clustered together to form a trading center or village.

Special Activity sites are the result of a unique activity that was not community-oriented and may have only lasted for a short period of time. Examples are portable saw mills, sorghum mills, stills, outlaw camps, tie-hacking locales and log slides, Civil War related sites, and Civilian Conservation Corps (CCC) camps. Again, many of these types of sites will have low visibility. The final class is Transportation Sites. These sites are the physical manifestations on the landscape that assisted transportation of people and goods, such as roads, ferry landings, bridges, fords, and railroad tunnels.

Smith's Classes and Types of Archaeological Sites (Smith 1993, 19)

AGRICULTURE ·
Hunter-Squatter (1820-1840)
Subsistence (1820-1940) ·
Pioneer (1820-1860) ·
General (1870-1920) ·
Specialized (1890-1940) ·
Share-Tenant (1870-1940) ·
Renter (1870-1940) ·
Rural Resident (1920-1940)

COMMUNITY SERVICE CENTERS ·
Mills · (1820-1920)
General Stores/Post Offices (1830-1940)
Schools ·(1850-1940)
Churches (1830-1940)
Cemeteries ·(1830-1940)
Hamlets/Villages (1830-1940)

SPECIAL ACTIVITY ·
CCC Camps ·(1830-1940)
Tie-Hacking/Log Slides ·(1820-1940)
Civil War (1860-1865)

Outlaw Camps (1830-present)
Stills (1830-1940)
Portable Sawmills (1910-1930)
Trash Deposits (1815-1940)

TRANSPORTATION
Bridges (1870-1940)
Ferries/Fords (1820-1940)
Roads (1830-1940)
Railroads/Tunnels (1850-1940)

Regional Architecture Before Fort Leonard Wood

Material Culture

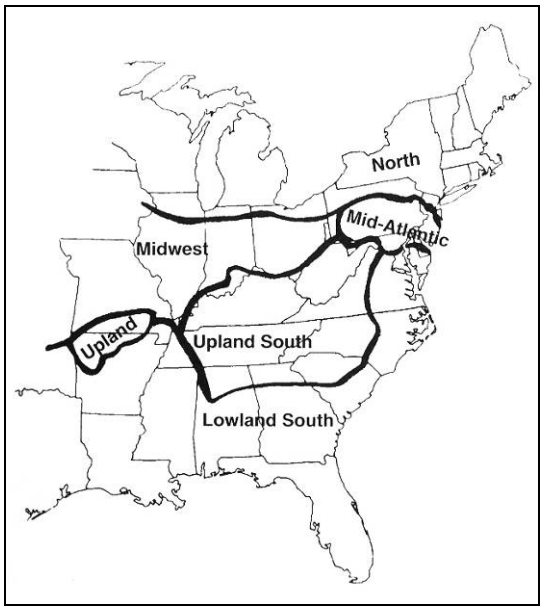

Figure 5: Kniffin's material folk culture regions (Sizemore 1994, 45).

Kniffen's model of cultural diffusion defines three clear source areas characterizing the material folk culture of the Eastern United States: New England, the Middle Atlantic, and the lower Chesapeake (Kniffen 1965, 557-558). The Ozark region adapted its material folk culture from the Mid-Atlantic region, through the migration patterns of the Scots-Irish. Arriving in America in the seventeenth and eighteenth centuries, they settled initially in Virginia. The descendents of these independent pioneers gradually moved westward through Kentucky and Tennessee taking with them an ad hoc mixture of cultural traits gleaned from the earlier German and English settlers along the eastern edge of America, and blending them with their own material culture. Over time, these migrants moved into the mid-west, and established farmsteads and communities, often choosing the rugged, wooded, marginal lands similar to the Appalachians and the Scottish Highlands. Known as the Upland South culture area, their settlement covered parts of Ohio, Indiana, Illinois, Arkansas, Mississippi, Alabama, Louisiana, Texas, Kentucky and Tennessee (Figure 5). Of most interest to this discussion, the Missouri Ozarks also hosted these settlers, and the isolation of this region enabled the retention of Upland South material culture traits until the land was purchased for

the development of Fort Leonard Wood (FLW) in 1940 (Smith 2003, 40; 59-60; Noble 1984, 110, 113.

The Upland South displays a blending of architectural contributions particularly from German and English traditions. For instance, the basic American folk houses in the region have their origins from English folk dwellings combined with German construction techniques (Sizemore 1994, 45). Scholars on the Ozark's material culture agree that the American log house resembles the fundamental unit of the English sixteen-foot square module, namely the single-pen house (Marshall 1981, 27; Smith 2003, 102).

In addition to the English module, Ozark log houses reflect German construction techniques such as log preparation and timber cornering. Although unhewn logs or half logs were commonly used on barns and outbuildings, rough-hewn logs were often used for houses, because the flat side of the interior wall was more serviceable and looked more complete from outside, adding greater status to the residents (Sizemore 1994, 148; Noble 1984, 110). The German corner notching styles offered advantages in the prevention of rot by draining away collected moisture from the corner notch at the log end (Pillsbury et al. 1970, 47; Sizemore 1994, 148).

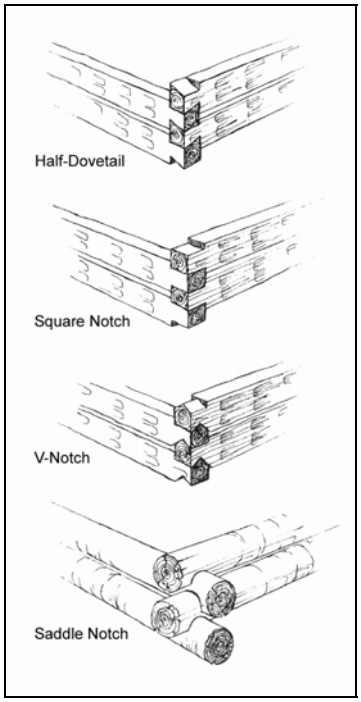

Figure 6: Common log notching types in Ozark region (Sizemore 1994, 149).

The three most common notching types found in the Ozark region were saddle notch, V-notch, and half-dovetail notch (Figure 6) (WPA 1986, 182). A saddle notch was the simplest way to secure the corner, and was typically used for barns and outbuildings (Noble 1984, 111). The V-notch was the most popular type for securing the corners of the log house. Even though it was more complex to build, its popularity was mainly due to the flush corner that permitted easy siding installation. Lastly, the half-dovetail notch was often square-hewn and was employed primarily by those who had some knowledge of carpentry skills (Ibid., 112).

Pine and oak were most often used to build log houses, due to their straight grains, durability, and workability. Pine was predominant in the valleys and hillsides and along the rivers, with the uplands being covered with many varieties of oak (Smith 2003, 12-13). Oak was often used for shingles, boards,

cooperage, and wagons, while other timbers like black walnut, cherry, and sassafras were for furniture (Sauer 1920, 116).

The Ozark region also has an abundant supply of sandstone readily available on the ground. Thus, it was an essential building material for houses and farmsteads. For instance, fieldstone was commonly used for foundations either as stone piers or continuous foundations (Sizemore 1994, 162). A CERL investigation of historic photographs and case studies of Ozark families from the 1930s revealed that a large majority (87.5%) of log houses in the FLW area employed either stone pier or continuous stone foundations. Over time, some owners could afford to build frame houses and also to upgrade their foundations, so concrete foundations appeared in 44% of the frame houses studied.

Fieldstones were also dressed and used for exterior chimneys, fireboxes, hearths, and doorsteps for the house. Wells and well covers were constructed of fieldstone, as were fruit cellars (Ibid., 162). Moreover, log barns were constructed with continuous fieldstone foundations. These foundations were usually two to three feet thick, and extended eighteen inches below the frost line and about one or two feet above the ground level. Other variants of the stone foundations were stone piers and single flattop boulders, which were usually placed at each corner of a barn, and elevated the superstructure about two feet above the ground (Noble et al. 1995, 46).

Settlement Patterns

By the late eighteenth-century the early hunters and subsistence farmers began to settle in the Ozark region. The early settlements were mainly located along the Missouri River, because the river was a main transportation route at that time. The farmers continued to move their way west along the river, looking for agricultural land (Smith 2003, 26). The early farmers mostly established small farmsteads in valleys or hollows or along the river bottoms. These areas offered advantages in ease of access, protection, good sources of water, abundance of building materials, transportation routes, and plentiful game. River bottomland offered the added advantage of fish and richer soils. The first businesses in the area, grain mills and saw mills, were located

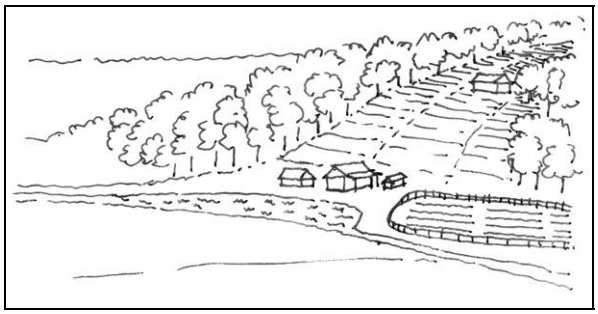

Figure 7: Typical farmstead located in the hollows of the Ozark region and along a stream (ERDC-CERL).

near the river as a power source. The extensive uplands were settled later, as the river bottomland was taken, and the relative flatness of the uplands held a distinct advantage over the steeper hillsides with their thin, stony soils. As farming technology developed, the uplands offered larger tracts for agriculture and increased numbers of settlers began to create the necessary tracks and primitive roads previously lacking on the uplands (Sizemore 1994, 134, 135). Through this general settlement pattern, they followed the norm for the Upland South culture area as a whole with the determining site selection criteria being: workability of soil, fertility of soil, presence of good water source, timber and stone, and healthfulness (Sauer 1920, 113, 115). The resulting population, prior to the development of FLW, was widely dispersed with scattered farmsteads, and loosely agglomerated buildings forming ill-defined towns.

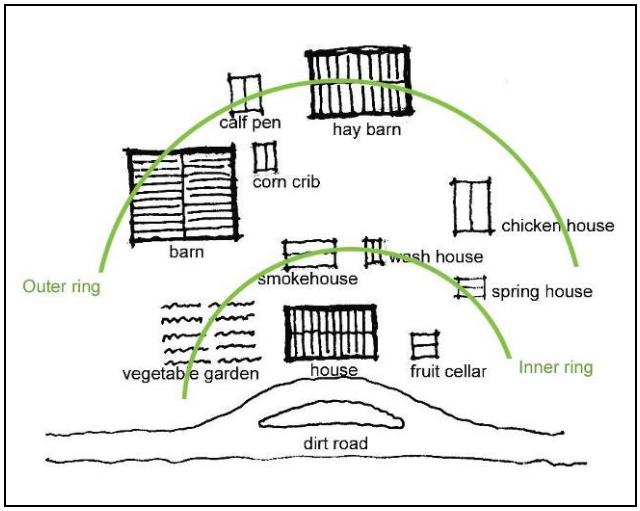

Figure 8: Typical farmstead located in the upland of the Ozark region (ERDC-CERL).

Some common farmstead layout patterns were apparent in the region. In narrow hollows the farmsteads followed a stream in a linear form with an order of house, barns and outbuildings extending up the slope (Figure 7). In larger hollows the farmsteads were evenly spaced up the hillsides until the steeper slopes were reached. Near headwaters, several of these linear farmsteads would be grouped, forming a fan-shaped pattern. On the uplands, the farmsteads exhibited a circular or semi-circular cluster of buildings, focused on the farmhouse (Figure 8). A yard surrounded the house, where an inner ring of multifunctional sheds such as chicken houses, smokehouses, and wells were located. Then beyond the inner ring, the outbuildings such as barns, animal pens, corncribs, and root cellars were arranged in a semi-circle for convenient access (Smith 2003, 100, 101). Our reviews of the historic photos and descriptions of architecture in the FLW area tends to support the presence of at least one or two outbuildings near the main farmhouse. Outbuildings were visible in 47% of the photographs examined.

The area between the rings often contained "kulsh piles," accumulations of material being kept for later use. Along with other demarcation systems such as

roads, paths, or trash accumulations, the kulsh piles helped define the boundary of the inner ring in a farmstead (Ibid., 100). It was not possible to determine the presence of these demarcation systems from the historic photographs reviewed. Smith also described fences as a landscape feature built around the crops to protect them from grazing animals (Ibid., 101). Fences were visible in approximately one-third of the photographs examined, indicating their use was prevalent. The most common materials for the fences were wooden post and wire and had a utilitarian appearance. Vegetable gardens were a common feature in the farmstead, also protected by fencing.

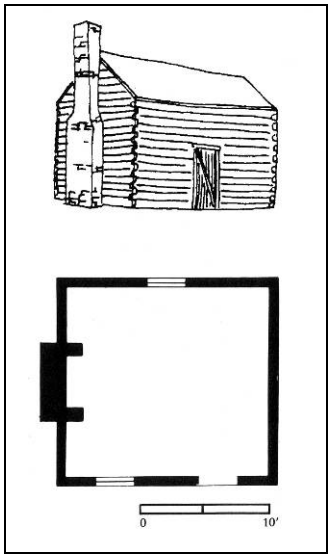

Figure 9: Single-pen log house (Sizemore 1994, 46; Noble 1984, 115).

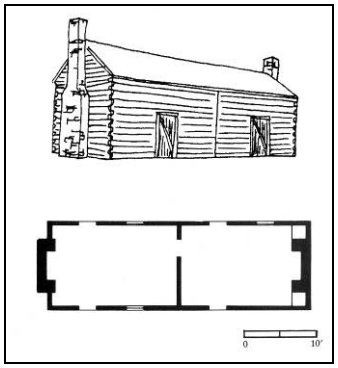

Figure 10: Double-pen log house (Sizemore 1994, 46; Noble 1984, 117).

Houses

The architecture styles in farmsteads changed very little from the antebellum period to the mid-20th century, resulting in a persistent cultural landscape in the FLW area. In the interior of the Ozark region, most of the dwellings were commonly one-story log cabins with rough-hewn or squared logs (Sauer 1920, 206). This is in accordance with our review of the historical documents that shows 60% of all buildings visible were constructed either of logs or of logs covered with wood siding. The typical log house types were single-pen, double-pen, saddlebag, and dogtrot.

The single-pen log cabin has a universal dimension of sixteen or seventeen feet on a side (Figure 9). The front door of the cabin is located on a side away from the chimney gable. The chimney is located at one end of the gable, and is usually built with stones available at the site (Smith 2003, 102). Often there is a shed addition at the gable end or to the side (Noble 1984, 114). The single-pen log house is often reconfigured throughout its lifetime. These log houses might have been sided with boards that were readily available from the nearby sawmills during the late 19th century as some owners became slightly more affluent (Smith 2003, 102).

The double-pen house is a single-story gable-end roof structure that has two similar-size rooms side by side with two separate doors to each room (Figure 10). Therefore, the façade of the log house follows a symmetrical treatment of doors

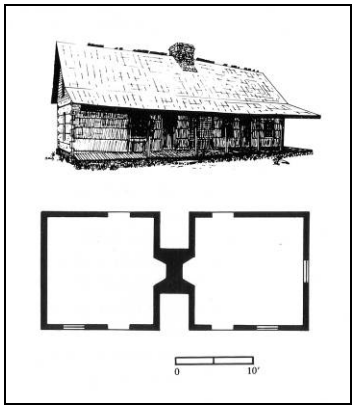

Figure 11: Saddlebag log house (Noble 1984, 116).

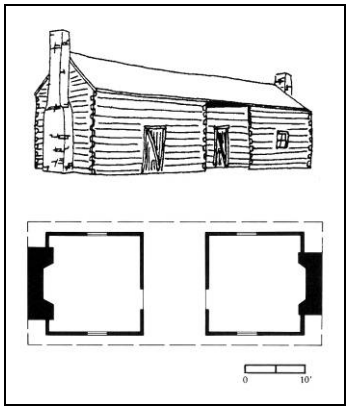

Figure 12: Dogtrot log house (Sizemore 1994, 46; Noble 1984, 118).

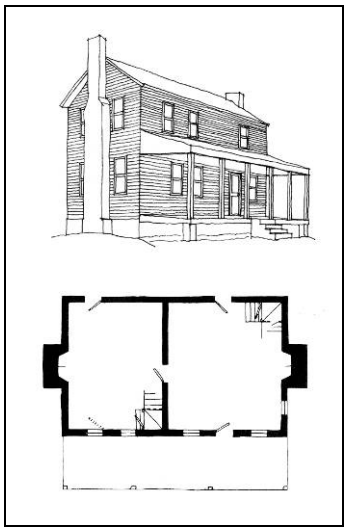

Figure 13: I house in the Ozark region (Marshall 1981, 63).

and windows (Sizemore 1994, 58, 59). This configuration can be achieved by adding an additional pen to the gable end of a single-pen log house away from the chimney. A second chimney is added to the new pen at the opposite end from the original chimney (Noble 1984, 117). However, in most cases the two pens were built simultaneously in wood frame construction (Ibid., 58).

The saddlebag house has similar characteristics to the double-pen except for the location of the chimney (Figure 11). Instead of two chimneys on either end, there is a central chimney between the two rooms. A new pen is usually added to the original single-pen log house as a separate pen by the adjoining chimney, since the log walls cannot be modified to expand. Thus, a gap is created in-between the two rooms by the chimney width, which is often covered with boards for better insulation (Ibid., 115).

The dogtrot house is the most common type of log house, because its configuration has an advantage over other types in providing a roofed outdoor area for sitting and household activities during the hot summer (Figure 12) (Sauer 1920, 116). The house has two equal pens separated but joined together under one common gable roof, leaving an open area at the center. This method of expansion of the single-pen house solved the connection problem between two log pens under one roof, so its popularity spread out quickly through the Ozark region (Sizemore 1994, 63).

Besides the log houses, I-houses are also found in the Ozark region (Figure 13). I-houses are typically two rooms long, one room deep and two stories tall. Materials depend on the locale, but most are frame. Most of the I-houses have rear additions to the back, while tall chimneys are built on one or both gable ends. The I-house type was more popu-

lar among the affluent farmers, first because it symbolized their economic status. The front façade of the house is oriented so it is fully visible from the road, which makes it more impressive than its actual size. The second reason is the one room depth facilitates good cross-ventilation creating a desirable indoor environment during hot and humid summers (Ibid., 74). The I-house was the most common folk house type throughout the Upland South through the nineteenth century and into the twentieth century, even though there are some variations in its decorations and its roof pitch (Ibid., 74; Noble 1984, 52; Sauer 1920, 206). In the FLW area, very depressed economic conditions resulted in fewer of the more expensive I-houses being built. Frame houses were observed in 37% of recorded homes, and approximately 30% of those were I-houses.

Barns

Barns were typically the largest structures in a farmstead. Before the mid-nineteenth century, barns were usually smaller in size such as single or double crib, and used for multiple purposes from storing hay, grain and corn, to feeding and sheltering livestock. However, in the latter half of the nineteenth and the early twentieth century, growth and expansion in the Midwest region brought about changes in farming practice. With the help of new farming machinery farmers began to abandon their subsistence farms for cash crop farming, which resulted in the demand for more land and eventually larger and more specialized barns. Larger barn types, such as the transverse frame, were developed to meet these needs (Noble et al. 1995, 25; Sizemore 1994, 117). Previous field research done in the Ozark region revealed three types of barns could be found: the single-crib, double-crib, and transverse. However, in the FLW area the most common type was the single crib barn, reflecting the persistent subsistence status of farmsteads until the 1920s (Sizemore 1994, 118; Smith 2003, 81).

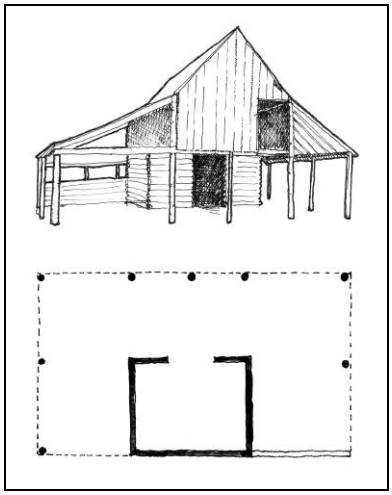

Figure 14: Single crib barn (ERDC-CERL from Sizemore 1994, 118).

Among the different barn types in the Ozark region, the most basic is the single crib barn, often surrounded by sheds of frame construction (Figure 14). This barn was usually built of logs and has a dirt floor, with few openings cut into the logs. The central log crib was used for storing hay or grain, whereas the frame sheds probably sheltered livestock. The size of the single crib barns can vary from sixteen feet to forty feet long (Noble et al. 1995, 29). Many of these barns also served as corncribs, which were often located at the perimeter of the cornfields away from the farmstead complex (Marshall 1981, 76).

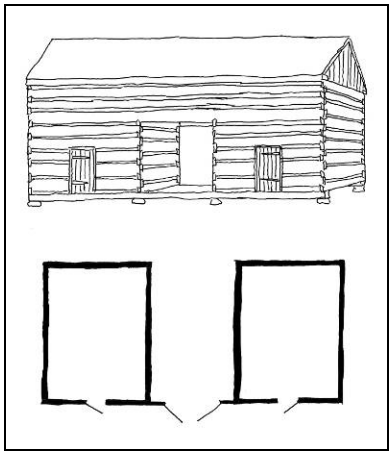

Figure 15: Double-crib barn (Noble et al. 1995, 31).

The double crib barn looks similar to the dogtrot house in that it has the central space open on both ends (Figure 15). This space often functioned as a threshing floor. In the early years of settlement, farmers often utilized the double crib

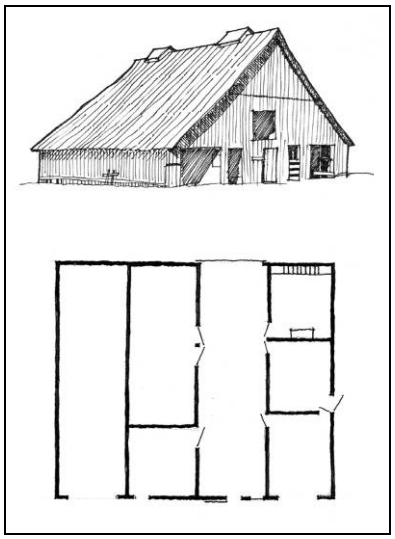

Figure 16: Transverse barn (ERDC-CERL from Sizemore 1994, 121).

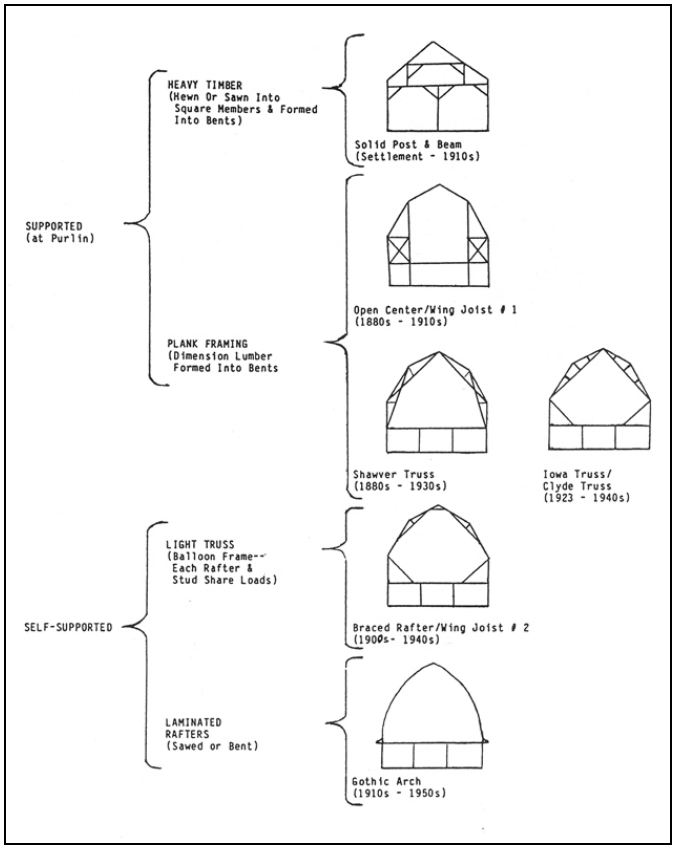

Figure 17: Development of different barn structures (Noble et al. 1995, 149).

barns by storing grains and hay in one crib and sheltering animals in the other (Noble et al. 1995, 32). Each crib size can vary from sixteen by sixteen feet to nine by sixteen feet. Such measurements for the cribs trace their origin to the English sixteen-foot square module for both dwellings and barns. The opening between the two cribs is about ten feet wide. Frame sheds are often added onto the front or back of the barns (Marshall 1981, 79).

Unlike the previous barn types, the transverse barns were predominantly constructed with timber frame (Figure 16). These barns had a long central passageway for wagons or trucks flanked on both sides by stables and storage areas for corn, grain, and hay. The roof of the transverse crib barn is gabled, and often has side-shed additions (Sizemore 1994, 119). However, as the large timber became more and more scarce and expensive, a new type of construction was invented by using plank lumber in the late nineteenth and early twentieth centuries. (Figures 17 and 18) (Noble et al. 1995, 147).

From our review, most of the barns and outbuildings were built with frame construction rather than logs. Most had metal roofs at the time the photographs were taken. Their foundation materials were evenly split between stone piers, continuous stones, and concrete pads. The comparison between the historical records and the information in the literature may suggest that those barns with stone foundations in the FLW area might have been constructed around the mid-nineteenth century, judging from the timing of the availability of sawn lumber to the local farmers from the mills in the southern part of Pulaski County (Smith 2003, 56). The barns with concrete foundations were likely newer structures, as concrete was not widely available in the area before the 1910-1920 period.

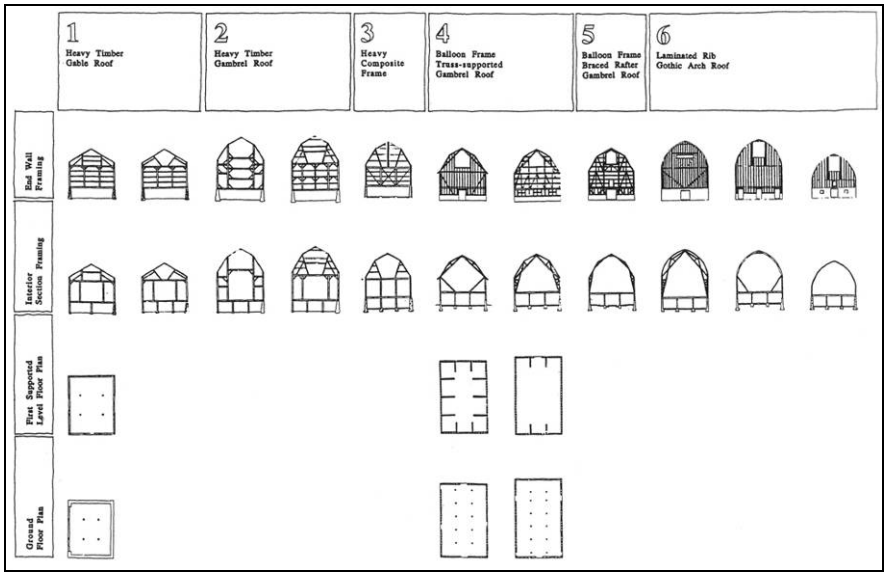

Figure 18: Prototype of barn structures (Noble et al. 1995, 271).

Other Buildings

The Ozark farmsteads had other types of outbuildings such as smokehouses, chicken houses, sheds, and corncribs. In the earlier farmsteads, people had fewer outbuildings, and they were mostly made of log. Among the outbuildings, the smokehouse and chicken house are considered to be the older structures since eggs, chicken, and cured pork were the essential diet in the Ozark region (Sizemore 1994, 114). Smokehouses were invariably located at the back of the house for easy access by the housewife as they were also used as pantries. They have a rectangular floor plan with an average size of twelve by fourteen feet. In the Ozarks, these structures were typically used for curing meat with salt, not smoking the meat (Ibid., 116). As a result, these structures were typically constructed of log although frame versions existed in the region. Corncribs are another quite visible structure found on most of the farmsteads. The Ozark's first settlers built rectangular corncribs with logs through the 1800s (Figure 19). The size of the corncribs remained small until the nineteenth century. However, as the economy gradually turned to market-oriented farming, the corncrib grew in size and in variety (Noble et al. 1995, 171). Many farms had springhouses, or wellhouses, which were constructed of log or stone over the spring or well (Figure 20) to provide a cool, sanitary place for storing perishable food (Sauer 1920, 116).

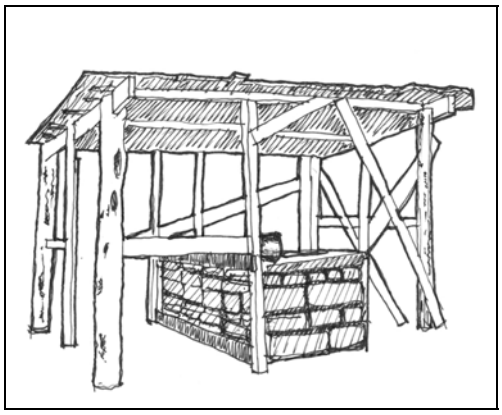

Figure 20: Spring house/wellhouse (ERDC-CERL from Sizemore 1994, 127).

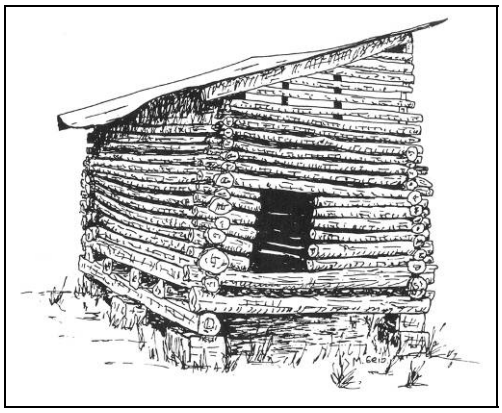

Figure 19: Pioneer's corncrib (Noble et al. 1995, 171).

The lack of log outbuildings in the circa 1940 photographs is likely indicative of the need to replace outbuildings fairly regularly. They were usually built with poorer materials and construction techniques than the main farmhouse or barn, and would deteriorate fairly rapidly. As frame became the predominant building material, it would have been used on the outbuildings as well. As a result, any existing remnants may not be an accurate indicator of construction period.

Architectural Content of the Fort Leonard Wood Area circa 1940

In an attempt to determine what was typical of farmsteads in the area, historical documents from the era were studied. There were four sources of historic photographs available: a report by Albert Mussman (1941) on the implications of the government buying up the land to form Fort Leonard Wood (Figure 21), a set of photographs from the U.S. Forest Service on the Mark Twain National Forest, a group of building inventory forms from Phelps County, and a report by Roberta Routh (1941) on the impact of the creation of Fort Leonard Wood on social security recipients in the area (Figure 22).

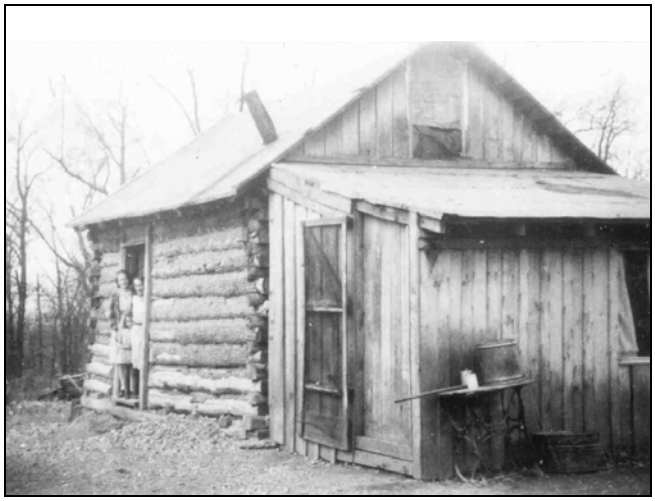

Figure 22: Photo of a local house and family on FLW land, circa 1940 (Routh 1941).

Each photograph was content analyzed for the elements appearing in this list. The Mussman report also contained textual case studies without photographs, which were also analyzed for descriptions of architecture/farmstead appearance. The statistics below came from a total of 7 textual descriptions and 57 photographs. Not all sources provided information for every category, as many elements were visible in the photographs, but not well enough to describe them in any detail. For example, there were 29 log cabins, but only 26 could be described as a certain type. For all counts of roofing material and foundation material, the percentages given are derived from the number in the category divided by the number of instances where this information is available, NOT the total building count, to give a more realistic accounting of what we can actually determine from the photos.

Figure 21: Photo of a local house and family on FLW land, circa 1940 (Mussman 1941).

1) Outbuildings in what percent of photos? 23 out of 49, or 47%

2) What percent of photos had landscape elements visible: 34 out of 57, or 60% (Roughly how many in each photo: 1 element visible, 17 out of 57, or 30%; 2 elements visible, 12 out of 57, or 21%; 3 elements visible, 4 out of 57, or 7%; 4 elements visible, 1 out of 57, or 1.7%)

3) What percent had two or more outbuildings? 7 out of 57, or 12%

4) What percent of photos showed fencing? 26 out of 57, or 46%

5) Percent of houses made of logs: 29 out of 79, or 37%
(Percent of log houses with: metal roofs, 1 out of 8, or 12.5%; wood shingle roofs, 7 out of 8, or 87.5%; stone pier foundations, 3 out of 8, or 37.5%; continuous stone foundations, 4 out of 8, or 50%; concrete foundations, 1 out of 8, or 12.5%)

6) Percent of log houses with outbuildings: 9 out of 29, or 31%
(Of these, what percent of outbuildings are log? 1 out of 9, or 11%; what percent of outbuildings are frame? 4 out of 9, or 44%)

7) Percent of houses made of logs covered with wood siding: 18 out of 79, or 23% (Percent of wood sided log houses with: metal roofs, 7 out of 11, or 64%; wood shingle roofs, 4 out of 11, or 36%; stone pier foundations, 0%; continuous stone foundations, 9 out of 9, or 100%; concrete foundations, 0%)

8) Percent of wood sided log houses with outbuildings: 3 out of 18, or 17%
(Of these, what percent of outbuildings are log? 0; what percent of outbuildings are frame? 3 out of 3, or 100%)

9) Percent of frame houses: 29 out of 79, or 37%
(Percent of frame houses with: metal roofs, 15 out of 18, or 83%; wood shingle roofs, 3 out of 18, or 17%; stone pier foundations, 4 out of 18, or 22%; continuous stone foundations, 6 out of 18, or 33%; concrete foundations, 8 out of 18, or 44%)

10) Percent of frame houses with outbuildings: 10 out of 29, or 35%
(Of these, what percent of outbuildings are log? 3 out of 29, or 10%; what percent of outbuildings are frame? 7 out of 29, or 24%)

11) Percent of houses of logs or wood sided logs: 47 out of 79, or 59.5%

12) Outbuildings: 34 outbuildings/features visible
(Visible barns, 14; Visible sheds, 20; Visible root cellars, 1; Visible cisterns, 2; Visible corn cribs, 1; Log [all single-crib], 5; Frame, 14 [with 7 transverse-crib, 4 double-crib, 2 single-crib, and 1 rectangular plan]; Other materials, 1 brick, 1 stone; Wood shingle roofs, 7; Metal roofs, 13; Stone pier foundation, 4; Stone continuous foundation, 3; Concrete foundation, 3;

13) Settlement patterns discernable: River bottom, 1; Hollows, 3; Upland, 16; On-Road, 2; Off-Road, 5; Dispersed buildings, 6; Clustered buildings, 6.

14) Landscape features: Fences, 28; Wooden post and wire, 16; Wooden, 7; Metal post and wire, 1; Log, 1; Wooden picket, 2; Wooden post and rail, 1; Driveways, 6; Walkways, 4; Flower/Shrub Planting, 5; Row of trees, 1; Rose garden, 1; Shrubs along fence, 1; Orchards, 2; Trash Piles, 2; Crops, 1 mention (sweet sorghum/corn); Other features in yard, 19; Vegetable Garden, 8; Outdoor table, 1; Cow Pen, 1; Piles of wood studs; 2; Piles of stones, 1; Piles of fire wood, 1; Electric pole, 1; Rainwater collector at gutter end, 1; Chickens, 1; Stumps, 1; Carriage, 1.

The following conclusions are drawn from the photography analysis:

- All photos were taken to show the main living structure, yet outbuildings showed up in 47% of them. If photos had been from another angle, it is likely even more outbuildings would be present in the photos. Two conclusions can be drawn: that there was a greater than 50% chance a farm would contain outbuildings, and that at least half the farms pictured had an outbuilding very close to the house.

- The clustered nature of some farms can be inferred from the proximity of outbuildings to farmhouses and the fact that 12% of the photos showed two or more outbuildings in what was usually a narrow field of vision.

- Landscape elements were very common, with 60% of photos showing at least one. Most common was fencing, visible in 46% of the photos and most fences were wooden post and wire.

- The percentage of homes built of log or log covered with siding (59.5%) was very high for the time period. This reflects the pervasive subsistence level of most rural inhabitants in the use of materials at hand.

- 37% of homes were built of wood frame, suggesting a step up the economic ladder for about a third of the population at some point in their family's history in the area. Frame houses were the most likely to have outbuildings visible in the photos by 35% to 31%.

- No matter what building material was used for the main house, outbuildings were almost always of frame construction. This could reflect the need to rebuild them more often than houses, or it could be that the increasing availability of sawn lumber during the early 20th century led to its wider use for "temporary" buildings. The main house would not often be replaced or rebuilt, and tended to retain its original materials.

- Metal roofs were the most common type for houses, featuring predominately on wood sided and frame houses. Wood shingles were the most common type on log houses. The metal roofs on frame houses are not surprising due to the higher socio-economic level these construction materials implies. The widespread use of metal roofs on siding covered log homes is likely due to replacing wood shingles when the house was originally sided; a general home upgrade.

- Log houses were more likely to have continuous stone foundations than any other type, although about a third had the more primitive stone piers. All wood sided homes (when visible) had continuous stone foundations, and frame houses possessed all three types, with 22% piers, 33% continuous stone, and 44% concrete. Only one other example of a concrete foundation was found, on a log house.

- By far the most common types of outbuildings were barns and sheds; most were frame construction with metal roofs. Foundations were about evenly split between piers, continuous stone, and concrete.

- Vegetable gardens were common landscape elements. Orchards and flower/shrub plantings appeared periodically. Six different types of fencing were determined, again indicative of using whatever material was easiest to obtain. Only two examples of decorative fencing were found. Two examples of trash piles were also found, although these would be difficult to discern in most of the photos.

Documentation and Maps

Before beginning any field assessments, several maps and documents should be consulted as appropriate. Historic context studies for the area should be referenced including Smith's *Made In the Timber* (2003), Goodspeed's *History of Pulaski County* (1974), and Rafferty's *The Ozarks Land and Life* (2001). The National Register's *Guidelines for Evaluating and Registering Archaeological Properties* should be consulted during the process of determining significance and integrity.

Any Phase I or Phase II Archaeological Reports containing information about Fort Leonard Wood's historical sites should be referenced. Any archaeological files and previous site visit notes on file with the Fort Leonard Wood Cultural Resources Program should be consulted prior to fieldwork and if possible, copied and brought out in the field. In addition, the following maps and graphical information should be studied and copied to bring in the field.

- 1873 Broadhead Geological Map of Pulaski County (Figure 23)
- 1890/1906 Pulaski County Map (Figure 24)
- 1930 Pulaski County Plat Map
- 1937 Tourist Map of Pulaski County (Figure 25)
- ·1940/41 Fort Leonard Wood Land Acquisition Maps
- 1944 Fort Leonard Wood Tactical Map (Figure 26)
- Aerial photographs (1938, 1942, 1955, 1964, 1967, 1971, 1975/76, 1986, and 1994) (Figures 27 and 28)
- GIS Maps (Figure 29)
- 7.5 ft USGS quadrangle maps for the Fort Leonard Wood region, with archaeological site locations marked

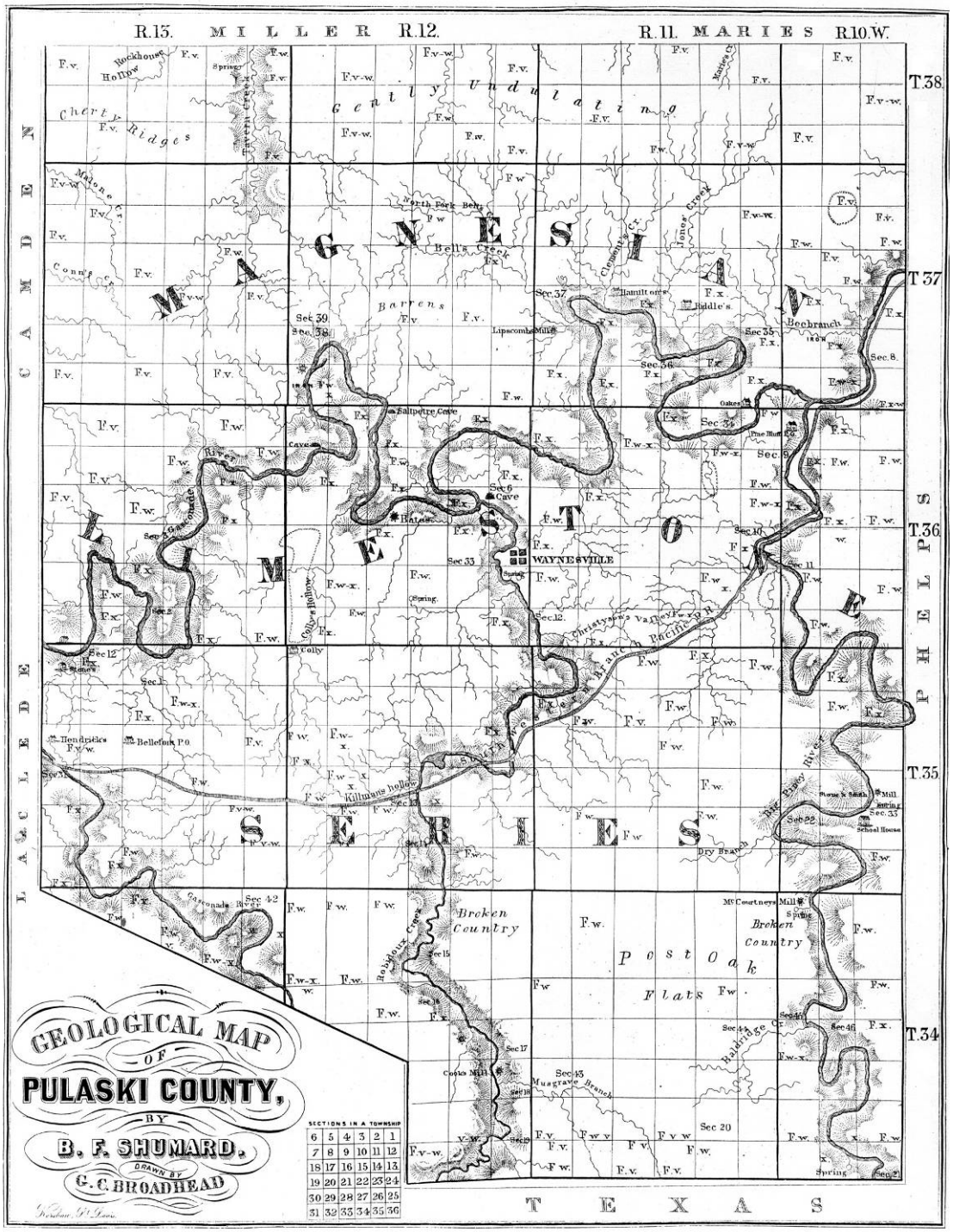

Figure 23: Pulaski County Geological Map 1873 by Shumard and Broadhead (FLW Cultural Resources Program).

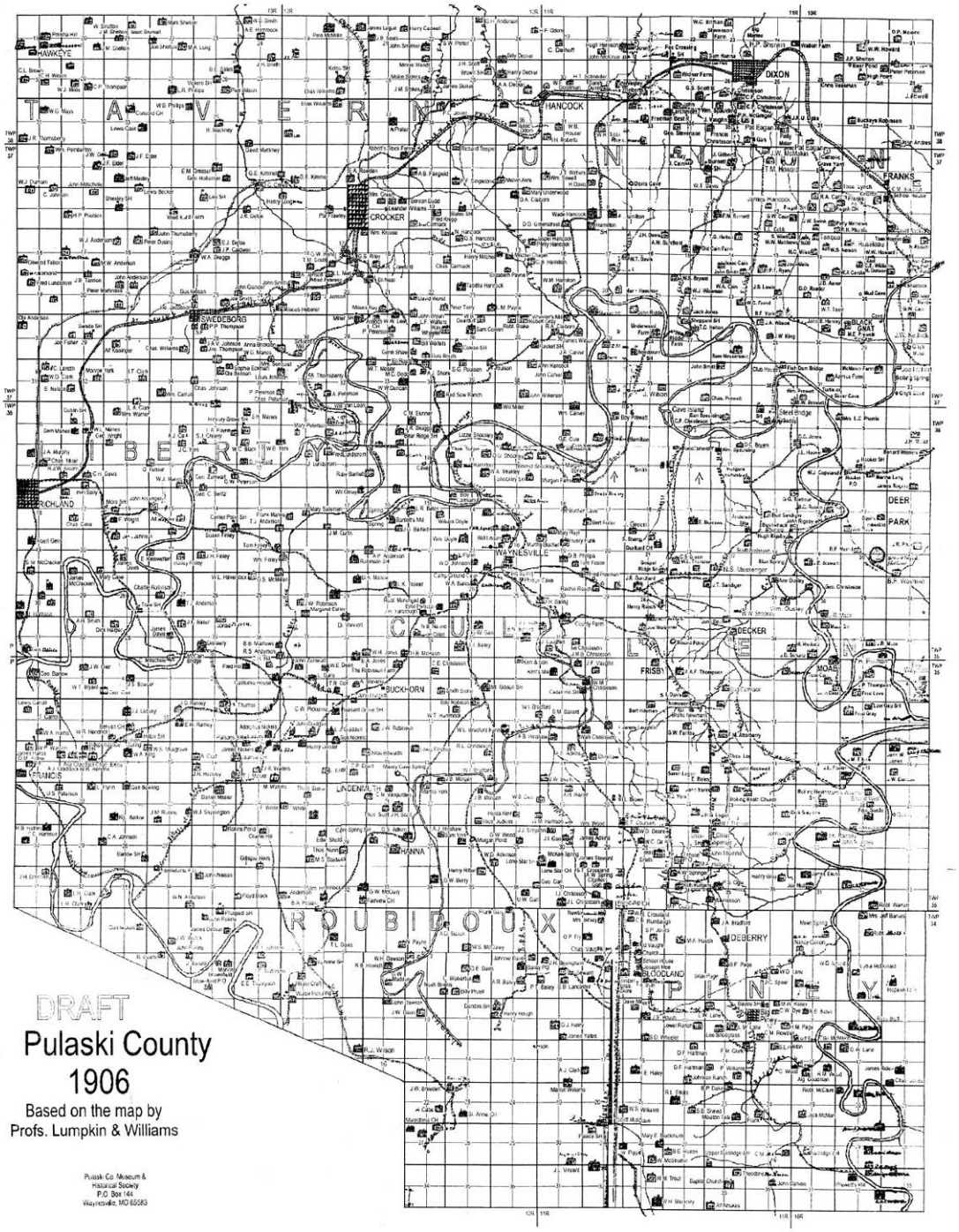

Figure 24: Pulaski County map dated 1906 based on the Lumpkin & Williams Map (FLW Cultural Resources Program).

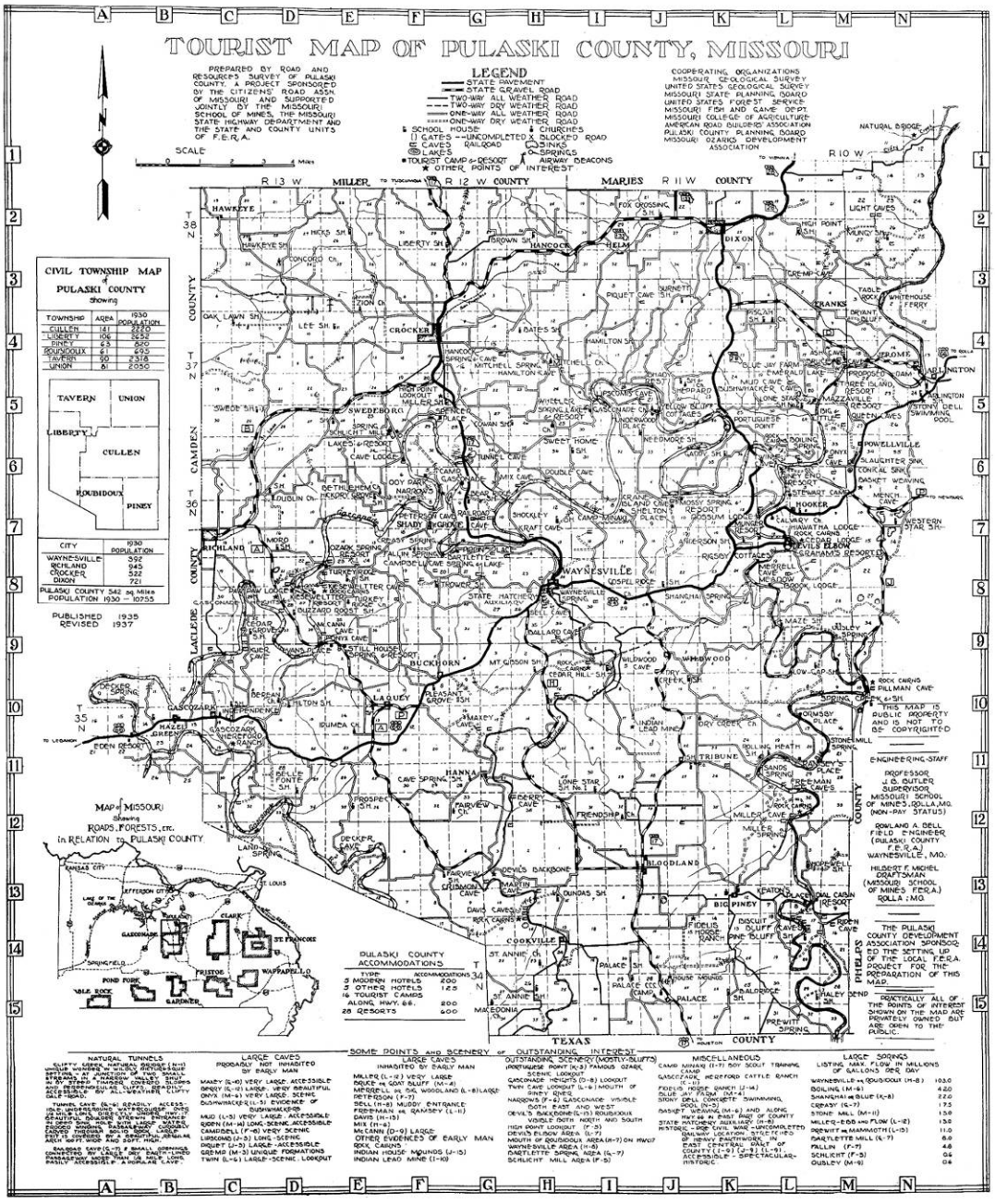

Figure 25: Tourist Map of Pulaski County 1937 (FLW Cultural Resources Program).

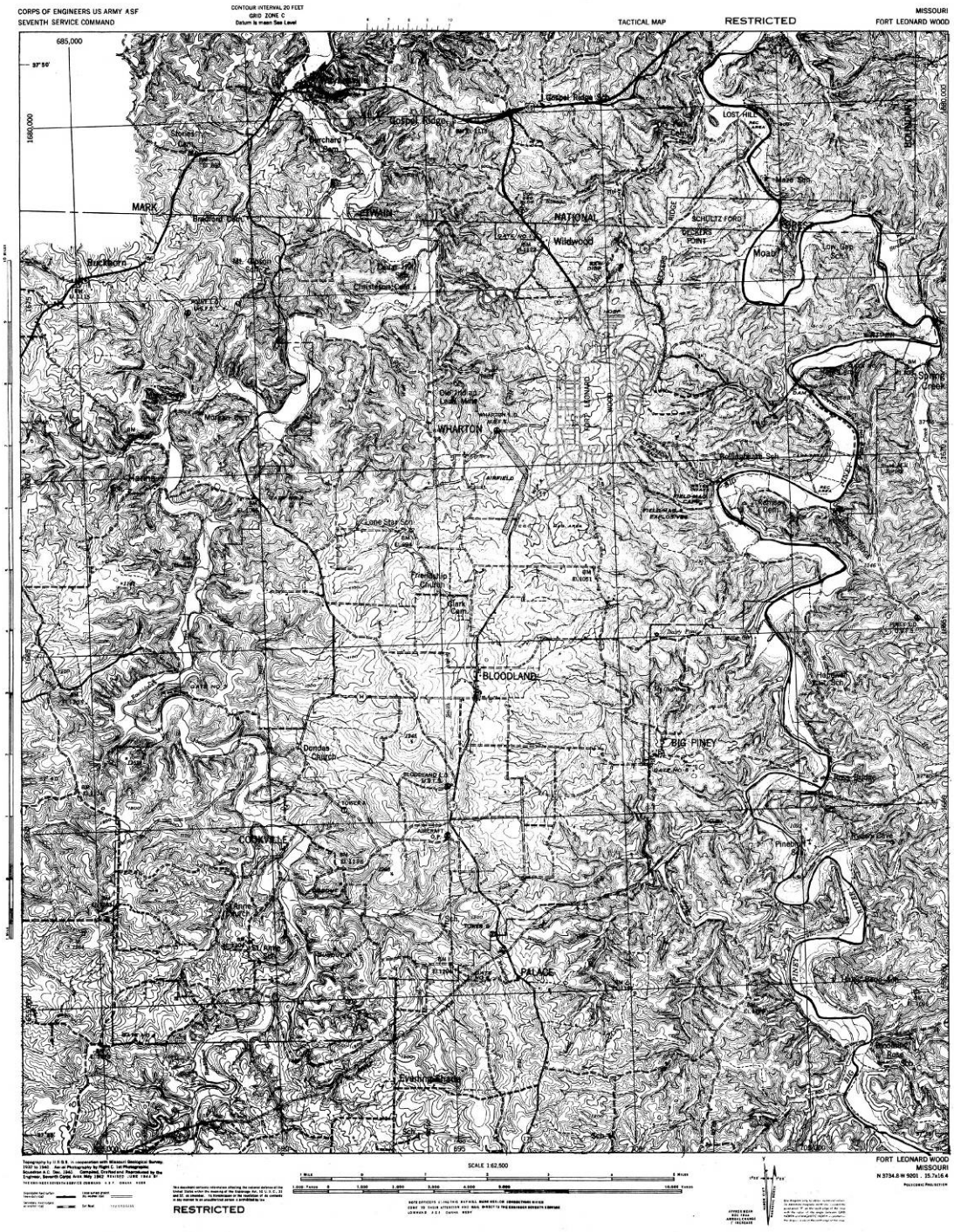

Figure 26: Fort Leonard Wood Tactical Map 1944 (FLW Cultural Resources Program).

Figure 27: 1938 aerial photo depicting a linear settlement pattern in the hollows of the FLW area. Arrow points to stream and linear farmstead is directly below (FLW Cultural Resources Program and ERDC-CERL).

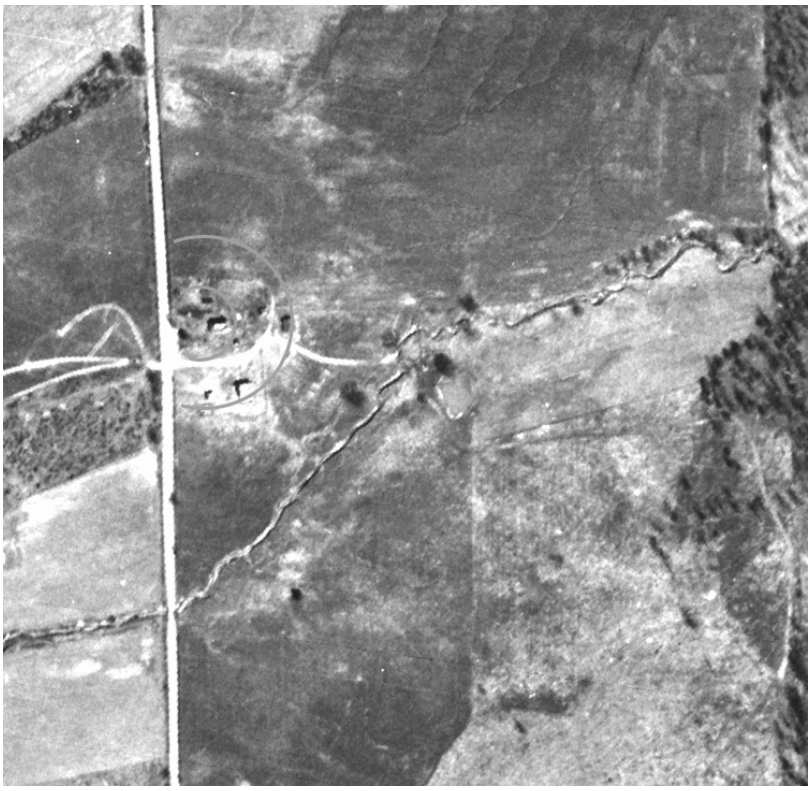

Figure 28: 1942 Aerial photo depicting a circular settlement pattern in the uplands of the FLW area (FLW Cultural Resources Program and ERDC-CERL).

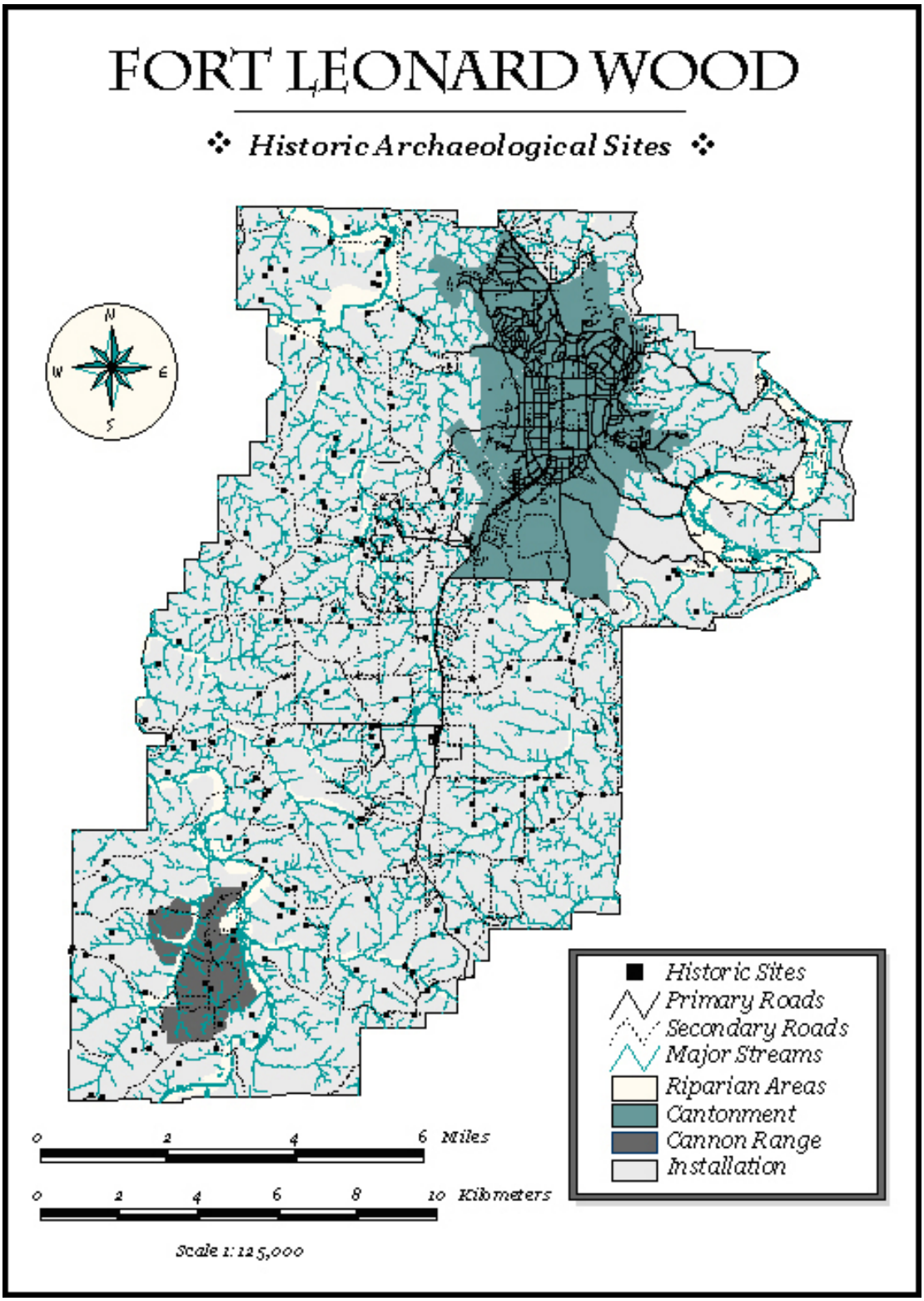

Figure 29: GIS map of historic archaeological sites at Fort Leonard Wood (FLW Cultural Resources Program).

List of Significant Persons of the Area

Early Settlers – Pre-1850 (from Goodspeed)

Baker
Baldridge
Ballew
Bates
Bell
Benton
Bowls
Bradford
Britton
Bryant
Buckhart (possibly same as Burchard)
Burchard (possibly same as Buckhart)
Cane
Christeson
Clark
Colley
Cook
Davis
Dear
Dodds
Gibson
Gillaspy (Gillespie)
Givens
Hayes
Helms
Henson
Hightour
Honsinger
Howard
Humphrey
Macklin
Maxey
McCourtney
McIlroy (McElroy)
Miller
Moore
Morgan
Musgrave
Myers
Newman
Saltsman
Skaggs
Stanley
Stark
Stuart (Stewart)
Tilley
Trower
Turpin

Common Pulaski County Names (2004)

Atterberry
Blalock
Christeson
Cook
Dye
Foster
Gan/Gann/Gans
Ichord/Icord
Morgan
Overby
Page
Ramsey
Reed
Smith
Wade
Wallace
Williams
York

III Present Day Context

Military Impacts on the Landscape

Figure 30: Photo of Fort Leonard Wood under construction, circa 1940. Used by permission, State Historical Society of Missouri.

On October 1, 1940, the U.S. Army officially announced it would purchase 65,000 acres in southern Pulaski County. Planning teams began arriving a month later and land purchases were actively being concluded by Christmas. Laborers flooded the region and construction for Fort Leonard Wood (FLW) began in early December. The land acquired to create FLW resulted in the elimination of several rural communities, including Cookville, Moab, Tribune, Wharton, Wildwood, and Bloodland. Numerous farmsteads, public buildings, schools, churches, and businesses were vacated and razed (Edging et al. 2003, 2-66).

During the WWII era FLW became the home of the Engineer Training Replacement Center, training engineer replacement soldiers and Army ground and service force units. The installation was designed for a capacity of 45,000 soldiers, and during the first six months of 1943 a daily average of 40,000 soldiers trained in engineering, ordnance, quartermaster, medical, chemical, military police, armor, artillery, and postal skills. The FLW WWII era population peaked at 56,000 (Ibid., 2-67).

On March 31, 1946, at the end of WW II, FLW closed its operations. An Oklahoma rancher leased the entire post, and thousands of head of cattle grazed the land. The installation remained on inactive status until August 1, 1950, when it was reactivated during the Korean conflict. Again, FLW performed an engineer replacement training role, providing basic infantry, advanced engineer, and en-

gineer specialist training. On March 21, 1956 the Secretary of the Army declared FLW a permanent installation (Ibid., 2-68).

The Vietnam conflict increased the number of soldiers stationed at the installation and accelerated building and facility improvements that continue today. FLW expanded its training role again in 1975, with a construction equipment operator training course for US Air Force and Marine Corps personnel, and combat engineer training began the following year (Ibid., 2-68).

While engineers had trained at FLW for many years, it was not until February 1985 that the Secretary of the Army decided to move the US Army Engineer Center (USAEC) to Missouri from Fort Belvoir, Virginia. FLW also trains enlisted and officer personnel in basic combat, military engineering, and motor vehicle operations. In 1999, the fort's mission expanded to include the US Army Chemical School (USACS) and the US Army Military Police School (USAMPS). The now US Army Engineer School, combined with the USACS, the USAMPS, and the FLW Garrison is now known collectively as the US Army Maneuver Support Center (MANSCEN) (Ibid., 2-68).

The extensive military use of the land from 1940 to the present has taken its toll on the remains of the historic communities and farmsteads that once dotted the landscape. Anecdotal information suggests metal and other building materials were salvaged from the abandoned farmsteads and buildings by the military during World War II scrap metal drives or to be utilized for other construction purposes. Current historic site conditions support this notion based on the lack of metal sheeting and roofing materials found at the sites. Some historical sites show evidence of ground disturbance from bulldozing and the digging of fighting positions, both military related activities. In addition, military maneuvers have taken place within and around the boundaries of historical sites on the installation for over 50 years.

Obviously many of these military activities have adversely impacted some historic archaeological sites at FLW. These impacts include military debris being left on the site surface; excavation of fighting positions and other entrenchments within the site boundaries; bulldozing and/or earth moving within the site boundaries; and demolition or bulldozing of structural features and foundations. While some historical sites have been severely impacted (75% or more of the site impacted), others show little or no evidence of impact (25% or less of the site impacted).

In addition, military and civilian personnel and members of the surrounding communities actively use the FLW lands for recreation purposes, and have done so for many years. Hunting, fishing, and hiking are common activities, to name a few. It is likely some of the impacts to the historical sites have come from people conducting recreational activities. It is expected these impacts are in the form of trash and other debris being left on the sites, and the removal or displacement of surface artifacts at a site, especially interesting items such as intact bottles.

In recent years protection measures have been established placing the historical sites off limits to military training activities that would result in ground disturbance. However, it is much more difficult to monitor and restrict the activities of recreational land users. Fortunately, it is estimated recreational impacts have been, and will continue to be, relatively minimal.

The FLW Integrated Cultural Resources Management Plan for FY2002-2006 outlines specific strategies for managing and assessing significance of historic era archaeological sites on the installation over the five-year period. During this period, it is expected FLW cultural resource staff will devote considerable time and resources to assessing the significance of and conducting Phase II archaeological testing on numerous historic era sites to reduce the conflicts of cultural resources with military training and offset projected impacts from the military mission. These projected impacts include, but are not limited to, increased bivouac development in the training lands, construction of new training areas and ranges, and road development and expansion (Ibid.).

Current Site Documentation

During January and February of 2004, 207 FLW historic archaeology site files were reviewed to get a sense of the current site conditions and typical and atypical features present at historical sites. Some of the historical sites were recorded in the mid-1980s while others were not recorded until the 1990s or more recently. In addi-

Figure 31: Photo of remains of a double pen cabin, 1992 (R. Edging, FLW Cultural Resources Program).

Figure 32: Photo of remains of a cellar at the A. L. Hicks site, 1992 (R. Edging, FLW Cultural Resources Program).

tion, many, but not all, of the sites have been revisited once and sometimes twice since their initial recording.

Site files from the 1980s generally are not as complete as those filled out or updated in the 1990s or more recently, therefore they do not provide as much information. Often these early files only contain cursory information about the site, such as the site's location on a quad map and a very brief description. Sometimes they lack a site map or mention only one or two of the multiple features actually present at the site. Any NRHP eligibility determinations indicated on these early site forms should be viewed with caution. Upon further investigation it has been found that many of these determinations, especially those indicating the site is not eligible, are inaccurate and cannot be trusted.

Sites files filled out since the 1990s are more informative. They usually contain a detailed site description, a site map indicating all features present, and sometimes artifact discussions. In addition, more recently recorded or revisited historical sites are included in the survey reports. The write-ups in the reports frequently provide more details than the site files themselves.

Figure 33: Photo of Bradford Cemetery, 2003 (ERDC-CERL).

While there is good information in many of the site files, more information is needed to make determinations about NRHP eligibility status. The two-part Site Inventory Form has been developed to gather much more specific and detailed information about each historical site. The first section of the form, to be completed in the office prior to a site

visit, asks targeted questions aimed at determining site significance. Answers to these questions will be found in the existing site files, on current and historic maps, and from archival and historical documents. It is anticipated some sites will be determined not eligible for the NRHP upon completion of this section of the form, while others will need further investigation and warrant a site visit.

The second section of the Site Inventory Form is designed to gather detailed information about the physical characteristics of the site, and will supplement the existing site file data. Specific questions regarding construction materials, building function, architectural style, yard area features, water sources, and vegetation seek to fill in the gaps left by the sometimes sparsely filled out site files. The remaining questions on the second section of the form deal with landscape features, artifacts, and historic and cultural themes as they relate to the site. Upon completion of this section of the form it is anticipated some sites will, at this point, be determined not eligible for the NRHP, while others will be recommended for further investigation and Phase II work.

Based on a review of FLW's existing historical site files, the following information was generated:

Site Type	Number of Sites
Farmstead	174
School	7
Church	2
Cemetery	3
Town	1
Railroad tunnel	1
Historic rock art	1
Well	1
Cabin	1
Military-related	6
Unidentified	10

Because there are so few non-farmstead site types (n=33), it was determined these sites would be looked at individually because of their uniqueness and potential significance (see Project Methodology section). Therefore, the remainder of the statistical analysis was conducted on farmstead sites only, as they constitute the bulk of the historical sites (n=174). The number of features per farmstead site varies, but the majority contain 4 features or less. For this review, features are defined as intact structural remains, discrete trash middens or

dumps, livestock ponds, man-made dams, etc. Artifact scatters and scattered and displaced structural remains are not included as features.

Number of Features	Number of Sites with this number of features
0 features	8 (artifact scatters only)
1 feature	45
2 features	43
3 features	27
4 features	28
5 features	10
6 features	6
7 features	2
8 features	1
9 features	1
11 features	1
15 features	2

The farmstead site files review was also conducted to get a sense of the typical building features at each farmstead and the specific historical function of the buildings. A number of site files list only the construction material, or the construction material and dimensions of the remains, with no indication of building function. Construction materials include poured concrete, cut and uncut local stone, cinderblock, brick, log, and dimensional lumber. The table below lists details about building features gleaned from the site files. Only features where the construction material, dimensions, and building function were noted are included in the table. Inferences about building function can be made about other unidentified building types based on dimensions.

Structure	Construction Material	Number
House	Log	6
	Concrete foundation	10
	Stone foundation	12
T-shaped house	Stone foundation	2
Barn	Concrete foundation	4
Shed (3 sided)	Stone foundation	1
Outbuilding	Log	1
	Concrete foundation	4

Structure	Construction Material	Number
	Stone foundation	2
Cellar	Concrete	7
	Stone	16
Silo	Concrete	4
	Stone	1
Cistern	Concrete	1
	Stone	1
Corral	Log	2

Artifacts

The following list is designed to provide basic dating information for common artifacts found on Fort Leonard Wood historic archaeological sites. The list is by no means all encompassing, but can be used as a guide for identifying artifact and site dates in the field. See the references section for sources.

Whiteware

Undecorated	ca. 1830-1900
Shell edge	ca. 1830-1860
Embossed edge	ca. 1840-1900
Blue hand-painted	ca. 1830-1850
Polychrome hand-painted	ca. 1830-1860
Annular	ca. 1830-1870
Transfer printed	ca. 1830-1870
Sponge decorated	ca. 1835-1870
Lusterware	ca. 1830-1860
Hand-painted/transfer printed	ca. 1840-1840

Ironstone

Undecorated	ca. 1840-1900
Embossed	ca. 1840-1910

Tealeaf	ca. 1860-1900
Transfer-printed	ca. 1880-1920
Hotel china	1880s
Decal	ca. 1890-1940

Other Earthenware

Yellowware	ca. 1850-1930
Bennington	ca. mid-19th century
Redware	ca. 1820-1900

Utilitarian Stoneware

Salt glazed	ca. 1700s-1900
Salt/Albany glazed	ca. 1850-1900
Albany glazed	ca. 1820-1920
Albany/Bristol glazed	ca. 1880s-1920
Bristol glazed	ca. 1920 +

Common 20th Century Earthenware

Fiesta	1936-1969, reintroduced in 1986
Harlequin	1938-1964
Riviera	1938-ca. 1950
Carnival	ca. 1938-mid 1950s
Pastel Nautilus	ca. 1930s-1950s
Serenade	ca. 1939-1944
Mexican-themed wares	1937-ca. 1950s
Kitchen Kraft/OvenServe	ca. 1930s-1960s

Glass Bottles

Ca. 1810	Introduction of dip mold, three-piece mold
Ca. 1840	Introduction of two-piece mold
Ca. 1860s	Introduction of iron molds
Ca. 1870	Introduction of embossed bottles

1875	Mold marks come all the way to the bottom edge of the lip
1880	Closed mold; formed the bottle, shoulders, neck, and 90% of the lip
1880s	Two semi-automatic blowing machines developed
1903	Owens fully automatic glass-blowing machine patented; by 1917 producing half the bottles in the US; end of production around the late 1940s or early 1950s
1858	Screw top for wide topped mouth patented
1877	Pittsburgh stopper patented
1878	Lightning stopper patented
1879	Hutchinson inside pressure held spring stopper patented
1892	Metal crown seal patented

Nails

Cut nails	ca. 1790-1910
Wire nails	ca. 1850-present

Cut nails first appeared in America in the 1790s. Early examples had a cut or sheared shaft with a hand-made head. Around 1815-1820 a completely machine made version was introduced (Type B). Cut nails were most popular from 1820 to 1910.

Wire nails were introduced into America in 1850 but were primarily used for box making. They were not adapted for building construction until the 1870s. By 1900 wire nails had almost universally replaced cut nails for construction, although cut nails continued to be manufactured and are still used today, primarily for restoration work.

Construction Materials

Typically, concrete foundations were not common in the FLW region until ca. 1900 – 1920. Stone foundations and piers were used well into the 20th century and concurrently with concrete foundations. Log pens can represent late 19th century construction but were also constructed well into the 20th century and used concurrently with dimensional lumber buildings.

IV Glossary

Contributing resource – A feature that adds to the historical associations, historic architectural qualities, or archaeological values for which a property is significant. A contributing resource should have the following qualities; it was present during the period of time that the property achieved its significance, it relates to the documented significance of the property, and it possesses historic integrity or is capable of yielding information relevant to the significance of the property (Townsend et al. 2000). Compare with *non-contributing resource*.

Features – The smallest elements of a site or property that can contribute to the significance.

Historic character – The sum of all visual aspects, features, materials, and spaces associated with a properties history.

Historic context – Those patterns, themes, or trends in history by which a specific occurrence, property, or site is understood and its meaning (and ultimately its significance) within prehistory or history is made clear (McClellan et al. 1999). The significance of a historic property can be judged and explained only when it is evaluated within its historic context (Loechl et al. 1998).

Historic district – A grouping of sites, buildings, structures, or objects that are linked historically by function, theme, or physical development or aesthetically by plan. The properties within a district are usually contiguous (Townsend et al. 2000).

Historic site – The location of a significant event or of historical human occupation or activity that possesses historic, cultural, or archaeological value regardless of the value of any existing building or structure (Townsend et al. 2000).

Integrated Cultural Resources Management Plan (ICRMP) – A five-year plan developed and implemented by an installation commander to provide for the management of cultural resources in a way that maximized the beneficial effects on such resources and minimized adverse effects and impacts without impeding the mission (AR 200-4).

Integrity – The ability of the present day landscape to convey its historical significance or the "authenticity" of historic identity. The National Register has identified seven qualities of integrity —location, setting, feeling, association, design, workmanship and materials (Loechl et al. 1998).

Ironstone – A highly fired, refined earthenware, harder than whiteware, slightly porous, with a white to light cream colored paste, clear glaze, decorated in multiple styles.

Landscape – The surface features of a place and the spatial relationship among those features, including natural terrain, human affected terrain, and the built environment (Loechl et al. 1998).

Landscape characteristics – The tangible evidence of the activities and habits of the people who occupied, developed, used, and shaped the land to serve human needs; they may reflect the beliefs, attitudes, traditions, and values of the people (Loechl et al. 1998).

Landscape process – A series of human actions or a continuous human action that is instrumental in shaping the land. Both large scale and small-scale landscape processes are the forces that result in the creation or alteration of landscape components (Loechl et al. 1998).

National Historic Preservation Act (NHPA) – Federal law passed in 1966 requiring and encouraging the consideration of historic properties in the planning and implementation of and use and development projects. Section 106 of this act requires that Federal agencies take into account the effects of their undertakings on historic properties. When a historically significant property may be substantially altered or demolished, Section 110 requires that appropriate records be made of the property and deposited in the Library of Congress (Loechl et al. 1998).

National Register of Historic Places (NRHP) – The nation's inventory of known Historic properties that have been formally listed by the National Park Service. Listings include, districts, sites, buildings, structures and objects that meet the set of criteria found in 36 CRF 60.4.

Non-contributing resource – A feature that does not add to the significance of the property, and was most likely added before or after the period of significance of the property. Compare with *contributing resource*.

Period of significance – The span of time in which a property attained the significance for which it meets the National Register criteria.

Significance – The key to determining whether a particular property is significant involves consideration of the property within its historic context. Historic significance is achieved when the property contains meaning or value based upon the important events, associations, characteristics, trends, or patterns of development contained in its historic context.

Stoneware – A very highly fired ceramic, nonporous, can be unglazed, partially glazed, or fully glazed in a variety of ways, paste is generally gray, tan, buff, or reddish in color.

Treatment – Work carried out to achieve a particular historic preservation goal.

Upland South – A material folk-culture region defined by Glassie (1968) that geographically encompasses an area of the Appalachian Mountains and west including the states of Kentucky West Virginia, Tennessee and western sections of Virginia, North Carolina, Missouri, and Arkansas (Sizemore 1994).

Upland South tradition – A cultural tradition exemplified by predominantly white, rural, farmer/hunters hardy and independent in nature, and often Scotch-Irish descendents (Smith 1993).

Vernacular landscape – Landscapes identifiably shaped by the activity of the people of a particular historical period, region, or group. These landscapes are of the everyday and ordinary and were not designed by professional designers or planners (Loechl et al. 1998).

Whiteware – A low-fired, refined earthenware, somewhat porous, with a white to light cream-colored paste, clear glaze, decorated in multiple styles.

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VI Eligibility Prescreening Form

VII Site Inventory Form

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14. ABSTRACT

Determining significance and National Register of Historic Places (NRHP) eligibility status for 19th and 20th century farmsteads and rural communities is difficult for most historic archaeologists due in large part to the vast numbers of very similar sites. In 2002 Fort Leonard Wood, MO, initiated a project to develop a methodology for assessing its 19th and 20th century historic sites. Two hundred and seven historic archaeological sites have been identified on the installation. Fort Leonard Wood has also produced a historical context covering the period from first European settlement to purchase of the property for the installation in 1940. By taking into account existing archaeological site data, historical context information, historic maps and photographs, archival records, relevant geographical data, architectural information, and distinguishing landscape characteristics, a larger physical context has been created for the historic sites. This comprehensive perspective on the landscape allows Fort Leonard Wood to determine which 19th and 20th century sites are most likely to contain useful information, thereby allowing the installation to focus its efforts on the more significant sites. The methodology provided in this study will provide guidelines for determining site significance and NRHP eligibility in a timely and cost-effective manner.

15. SUBJECT TERMS
historic sites, landscapes, archaeological research, National Register of Historic Places (NRHP), Fort Leonard Wood, MO

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